Assessment of Patients' Knowledge, Perception, and Practice Regarding COVID-19 at Kiryandongo General Hospital

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ABSTRACT

Using data from Kiryandongo General Hospital, this study examines patient knowledge, attitudes, and behaviours related to Coronavirus disease 2019. To effectively implement public health interventions throughout the worldwide pandemic, it is imperative to comprehend people's awareness, attitudes, and behaviours around Coronavirus disease 2019. A systematic questionnaire was used to perform a cross-sectional survey among patients at Kiryandongo General Hospital in order to gauge their understanding of Coronavirus disease 2019, how serious it is seen to be, how it spreads, and what safety precautions they have taken. The results provide insights into patients' awareness levels, perspectives on the epidemic, and the degree to which suggested preventive actions are being took. In order to improve Coronavirus disease 2019 prevention and control activities within the population that Kiryandongo General Hospital serves, the data will help shape focused health education initiatives and interventions.

Keywords: COVID-19, Coronavirus, Epidemic, Kampala

INTRODUCTION

Coronavirus disease 2019 (COVID-19) is an emerging public health problem threatening the lives of over 2.4 million people globally [1]. The WHO identified this severe form of pneumonia caused by a new coronavirus leading to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) on December 31, 2019, in Wuhan, China [2]. On March 26, 2020, it was declared a pandemic disease [2]. Coronavirus disease 2019 (COVID-19) is a disease of the respiratory tract caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)[3]. COVID-19 disease is said to be mainly transmitted through contact with respiratory droplets produced by an infected person, and its clinical manifestations range from asymptomatic cases and mild upper airway infections up to severe and fatal cases with pneumonia and acute respiratory failure [4]. Globally, the new coronavirus has infected close to 132 million people, resulting in more than 2.8 million deaths as of April 7, 2021. In the United States alone, the number of COVID-19 cases surpassed 30.5 million, with more than 552,000 deaths. The infections and associated morbidity and mortality continue to increase worldwide, with intermittent flareups even in countries that were assumed to have brought them under control [5]. Currently, the WHO reports that COVID-19 deaths in Africa have surged by 40% ever since the virus was reported on the continent on February 14, 2020. This surge comes as Africa is battling new and more contagious variants, for which it has geared up its largest-ever vaccination drive [3]. Uganda launched its mass COVID-19 vaccination programme on March 10, 2021, thereby joining a host of countries in Africa to initiate jab inoculations. According to the Ministry of Health, Uganda aims to vaccinate at least 49.6% of its population (21,936,011) with the Oxford University-AstraZeneca COVID-19 vaccine at different phases [6]. Before the introduction of the COVID-19 vaccine and effective experimental treatments, countries have been relying on a combination of non-pharmaceutical interventions (NPIs), such as face coverings and physical distancing, and policy measures such as severe restrictions on public gatherings, temporary closure of institutions, and work from home (WFH) policies [7]. However, recent efforts are being made to speed up vaccinations since immunization has proved to be an important strategy for controlling the COVID-19 pandemic [8], and health experts agree that widespread use of safe and effective vaccines will rapidly contain the COVID-19 pandemic [6]. While the governments of high-income countries pre-ordered these vaccines, low- and middle-income countries had difficulties purchasing enough doses for their populations. To bridge this gap, the COVAX initiative was created to rapidly procure and deliver doses of a safe, effective, and approved vaccine for equitable distribution around the world [1]The big question is whether these vaccines can easily be accepted by their end-users [3], because, much as vaccines are essential in battling against COVID-19, it is paramount to establish vaccine acceptance campaigns before they reach the community. This is because the fear of vaccines has grown radically in the past few years. In some African communities, this fear has led to a significant increase in rates of vaccine refusal, which has led to an increase in vaccine-preventable diseases [9]. In Uganda, the COVID-19 vaccination with the AstraZeneca vaccine was launched on March 10, 2021, with priority given to healthcare workers and individuals at risk of severe COVID-19 and death. However, little is known about the acceptance of receiving the vaccine among Ugandans, especially in the priority groups. Reports from the government of Uganda also indicate there is a slow uptake of the COVID-19 vaccine in

the country, with only about 400,000 people vaccinated by May 10, 2021 [10]. Adherence to the recommended COVID-19 prevention measures is mostly influenced by knowledge, attitudes, and practices. Thus, communities and healthcare workers must be equipped with adequate knowledge of COVID-19 prevention policies for them to have positive attitudes and appropriate practices that contribute to decreasing the risk of infection. Assessing knowledge, attitudes, and practices towards COVID-19 among healthcare workers and communities can aid pandemic control efforts by identifying critical gaps that should be the focus of training and vaccination policies [11]. As low- and middle-income countries are starting to receive COVID-19 vaccines, it is important to understand the factors that influence the uptake of COVID-19 vaccines to create strategies for increasing vaccine coverage to rapidly bring the pandemic to an end [12]. Moreover, despite the imminent prevention strategies imposed by the government, such as social distancing, hand washing, travel restrictions, and the use of alcohol, hand rubs, and face masks, these preventive and control measures are not currently being applied throughout the country [13]. Such effective prevention and control of COVID-19 is attained through improving the knowledge, attitude, and practice of the general community and, most importantly, the high-risk population groups, such as suspected cases, towards COVID-19 [14]. Hence, this study aimed to assess the knowledge, attitude, and practice that inform efforts to combat COVID-19 among patients at Kiryandongo Hospital.

Approximately 2.3% of the world's population has now been infected by the severe acute respiratory coronavirus-2 (SARS CoV-2), the novel coronavirus and etiologic agent of COVID-19, and more than 3.3 million people have died [15] As of May 1, 2021, 150,110,310 confirmed cases of COVID-19, including 3,158,792 deaths, had been reported to the WHO globally. Of these, over 4.5 million confirmed cases, including more than 121,000 deaths, were in sub-Saharan Africa. Although initially slow to spread in Africa, confirmed cases of COVID-19 on the continent are rising steadily[16]. The uptake of COVID-19 vaccines is critical to personal health, protecting vulnerable populations, reopening socio-economic life, and achieving population health and safety through immunity[17]. Moreover, it has been suggested that because the COVID-19 pandemic is so serious, the patient character could be more influential regarding uptake than the level of medical advice received, because, during the pandemic, any eligible patients will have been advised by their general practitioner (GP) to have the vaccination [18]. Previous studies on viral disease outbreaks, like SARS in 2003 and Ebola in 2018, have shown that the management and control of an outbreak requires a good understanding of the population of the disease to avoid its spread in the community [18]. It is therefore necessary that a survey be undertaken to establish the level of awareness, knowledge, and attitudes of the population about the COVID-19 pandemic and the measures put in place to mitigate it [19]. The continent of Africa has poorly equipped health settings to manage thousands of COVID-19-infected people in comparison to developed countries [20]. It is also clear from the current reports that even the healthcare systems in high-income countries have been overwhelmed by patients even though they are better equipped [21]. Therefore, the best strategy for a low-resourced setting like Africa and Uganda, in particular, would be to mitigate the spread by quickly improving the awareness, knowledge, and attitude of the population of the population and the adherence of the population to the preventive measures in place [22]. However, there is a paucity of data on public knowledge and attitudes towards the prevention of COVID-19 [23, 24]. It is therefore important that a survey like this be carried out so that evidence-based strategies are put in place to address the shortcomings identified. The study was designed to assess the knowledge, attitude, and practice that inform efforts to combat COVID-19 among patients at Kiryandongo Hospital.

METHODOLOGY

This chapter presents an evaluation of the research methodology for the proposed study, which includes the study design, study site and setting, study population, sample size determination, sampling technique, eligibility criteria, data management, and ethical considerations.

Study design

A quantitative cross-sectional study approach was conducted to assess the knowledge, perception, and practice of COVID-19 among patients admitted to Kiryandongo Hospital.

Area of Study

The study was conducted in the Kiryandongo General Hospital, located in the mid-western region of Uganda, approximately 280 kilometres from Kampala, the capital city of Uganda. The hospital is approximately 198 kilometres (123 mi) by road, northwest of Mulago National Referral Hospital, Uganda's largest referral hospital (Globefeed.com (GFC), 2016). The coordinates of Kiryandongo General Hospital are 01°25'41.0"N, 31°21'16.0" E (latitude: 1.428051; longitude: 31.354451).

Study population

The study was conducted among patients admitted to Kiryandongo Hospital.

Inclusion criteria

It included all patients at Kiryandongo Hospital who were available at the time of collecting data and were willing to participate in the study.

Exclusion criteria

i.   Those who declined to participate
ii.   Patients who were too ill to answer questions or participate.
iii. Patients with an altered level of understanding.

Sample size determination

The sample size was determined using Kish Leslie's formula (1965): n = (Za/2)2p (1-p).

e2[25]

Where;

n is the required sample size,

p is the approximate number of COVID-19 patients at Kiryandongo General Hospital,

e is the permissible error in the estimate.

Until this study was conducted, there was no published data about the knowledge, attitude, and practice towards COVID-19 among individuals at Kiryandongo General Hospital. Therefore, a 50% proportion was used to get the maximum sample size by taking into account the 95% confidence interval ($Z\alpha/2=1.96$) and the marginal error (d) of 5%. In line with the above consideration, the minimum calculated sample size was 384. The researcher was only able to interview 78% of the calculated sample size.

Sampling Procedure

Simple random and purposive sampling techniques were used to choose respondents to participate in the study, from whom data was collected.

Dependent variables

Prevalence of COVID-19

Independent variable

The independent variables include sociodemographic factors, knowledge, and practices towards COVID-19.

Data collection methods and tools

Data was collected using an interviewer-administered questionnaire. The researcher met with the targeted respondents who took part in the study after obtaining permission for data collection from the respondents. Each participant was required to give informed consent before enrolling in the study. The researcher assisted the respondents in filling out the questionnaires by explaining to them for clarification. The properly filled questionnaires were then collected, and data was taken for analysis. The researcher used a structured questionnaire, and participants were asked similar questions, and from the options, they picked the best alternative.

Data entry and cleaning

The data in the questionnaire was checked for completeness, cleaned, and sorted to eliminate obvious inaccuracies and omissions. The data was then coded and entered into a computer.

Data analysis

The qualitative data collected was statistically analysed and documented using Microsoft Excel and Word version 2019, which were then analyzed. The analysed data was presented in the form of tables and graphs, which formed the basis for discussion and conclusion, among others.

Quality control

To ensure quality control, the researcher conducted a pre-test using 10 questionnaires in the target population, and data was collected before the actual study to help in the reconstruction of the questionnaire where necessary.

Ethical considerations

Participants were given information regarding the research to seek consent. Each participant's choice to participate or not was respected, and the data collected from participants was kept confidential. The participants' names were not included while filling out the questionnaire to maintain privacy. It was communicated that the information obtained from the participants would be kept under lock and key to only be used for research purposes.

RESULTS

## Demographic Characteristics of the Participants

A total of 300 study participants were included in this study. The mean age of the study participants was 36 years. The majority of study participants (61.5%) were males, and about 52.6% of the study participants were aged between 30 and 49 years. Regarding the residence of the study participants, most (85.2%) of them lived in urban areas. The majority of study participants (65.1%) had tertiary education, 19% had secondary education, 11.5% had completed primary education, and 4.4% had attained no formal education at all. About occupation, 153 (51.0%) of the participants were students, and 25 (8.3%) were civil servants. 69 (3.0%) were peasants or farmers. 33 (11.0%) were self-employed, while 20 (6.7%) had other

occupations. Majority 94 (31.3%) of the respondents were Catholics, 82 (27.3%) were Anglicans, 23 (7.7%) were SDAs, 53 (17.7%) were Muslims, and 48 (16.0%) the respondents belonged to other religions.

Figure 1

Figure 2

Figure 3

Figure 4

Occupations of the study participants
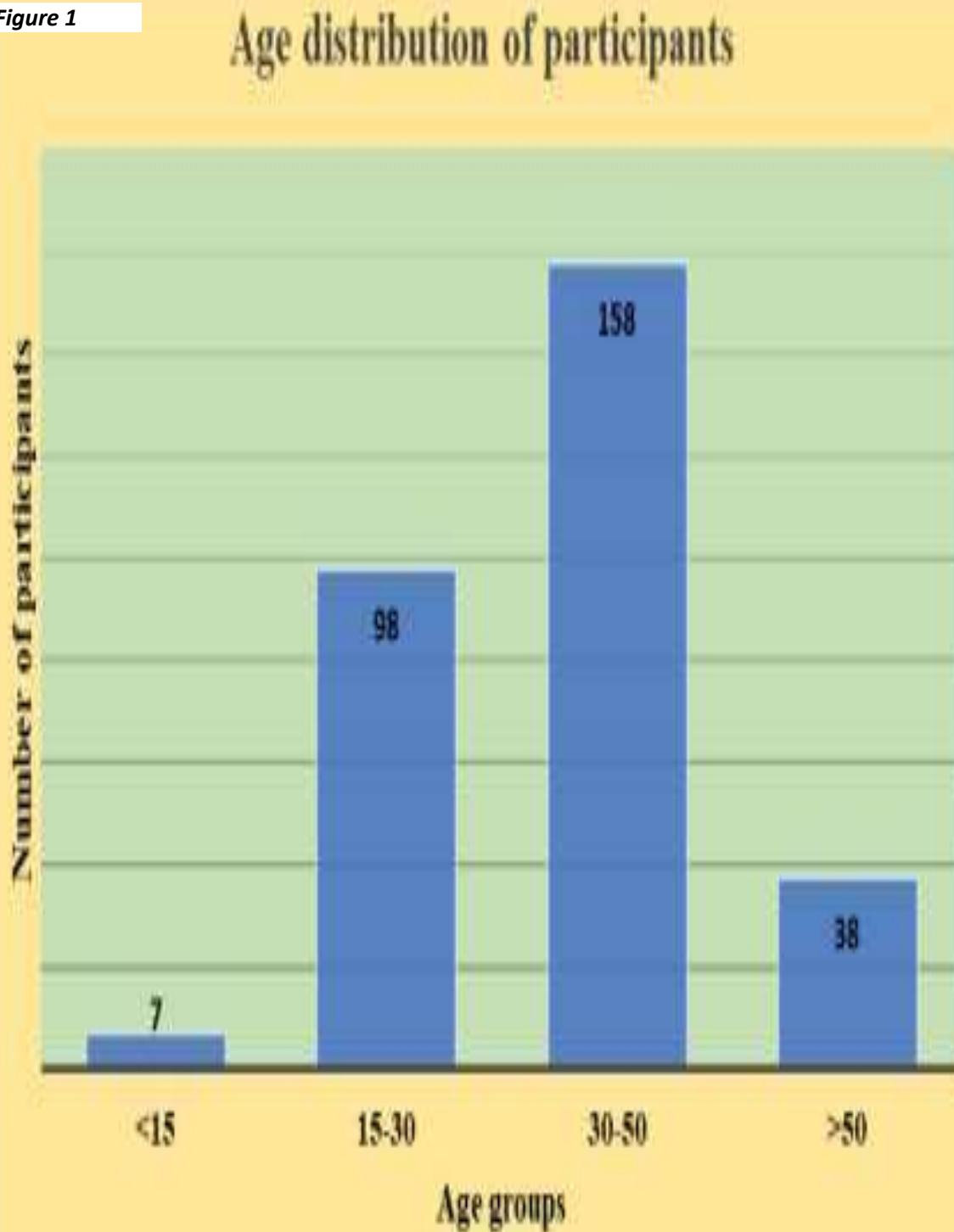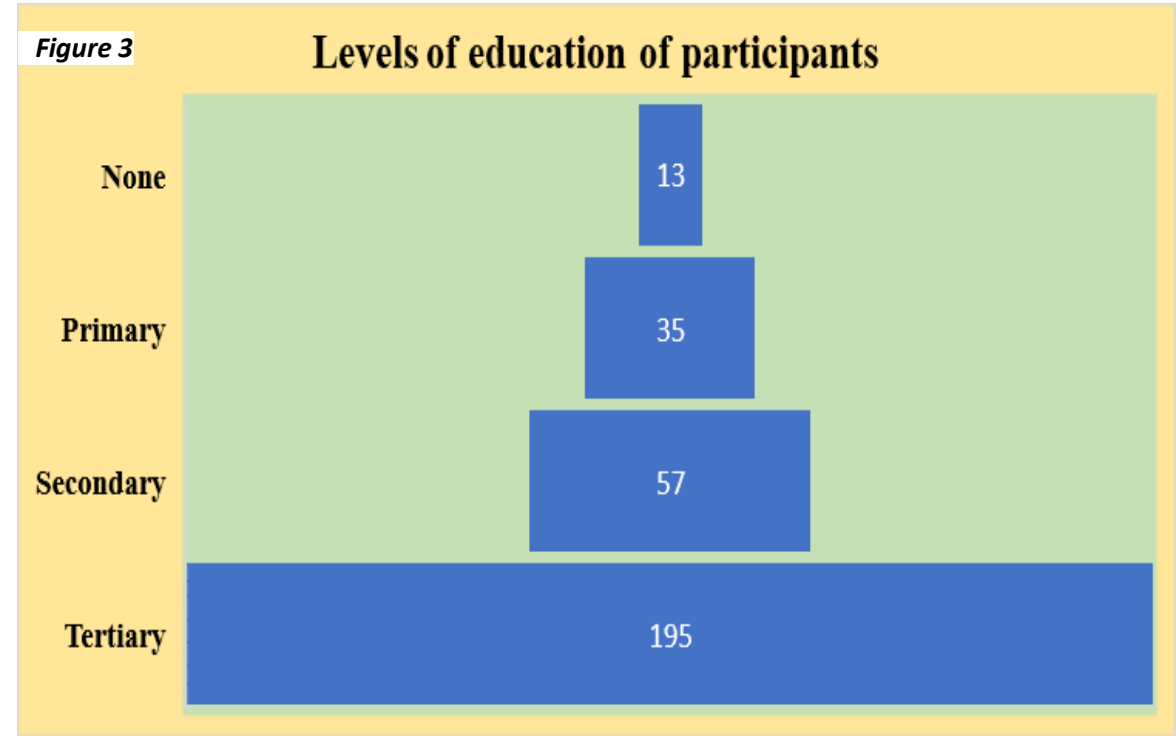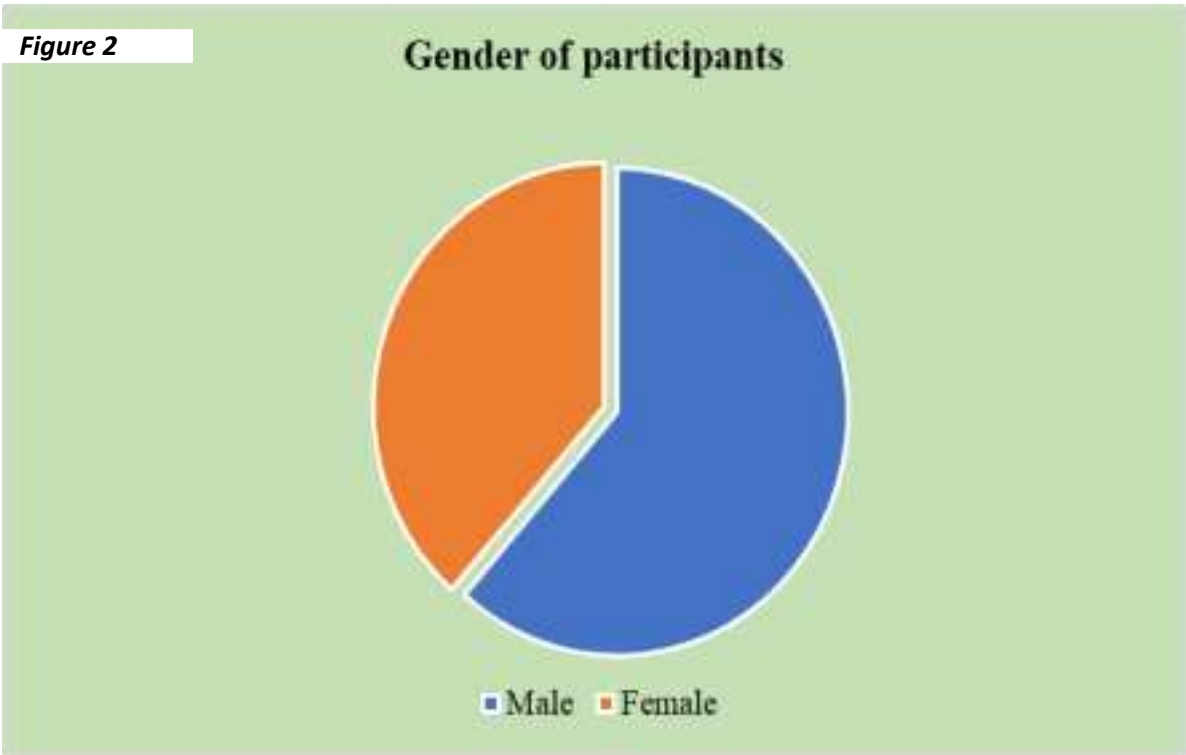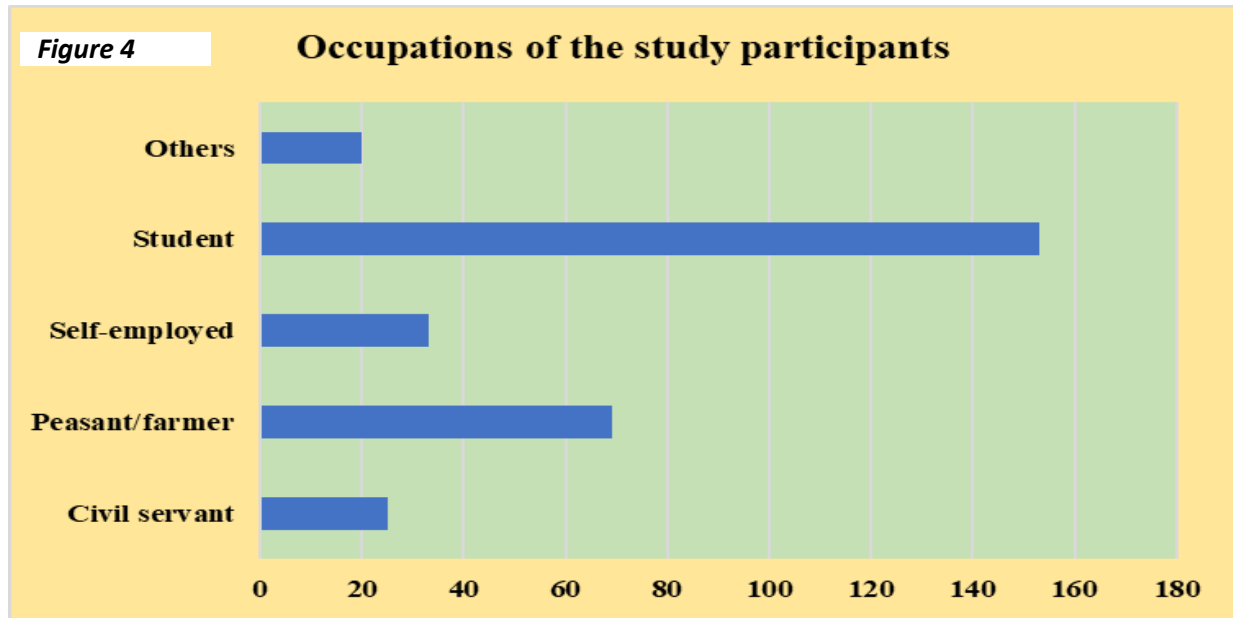
Knowledge of the Participants about COVID-19

Almost all (98.3%) of the participants knew that COVID-19 was caused by a virus. All respondents (100%) had heard about the COVID-19 pandemic. The primary sources of information for the majority of study participants were television and radio (85.9%) whereas friends (15.6%) and Health facilities (4.7%) were found the least sources of information. Other sources of information were school, social media etc.

Table 1: Shows the Knowledge of the Participants about COVID-19

Knowledge Question	Frequency	Percentage
What causes COVID-19?		
Bacteria	0	0.0
Fungi	0	0.0
Virus	295	98.3
I don't know	5	1.7

The magnitude of good and poor knowledge among the study participants was found to be 51.3% and 48.7% respectively. A high number of respondents had poor knowledge about the major symptoms; fever, cough, sore throat, muscle pain, and difficulty breathing, of COVID-19. Moreover, 243 (81.0%) of the participants were aware of the helpfulness of avoidingcrowded places for the prevention and control of COVID-19. On the contrary, 248 (82.6) of the participants did not provide the correct response to the question about the possibility of transmission of the disease by asymptomatic persons.

Continuation of Table 1

Knowledge Questions	Yes	No	Yes (%)	No (%)
Do you know the most common symptoms of COVID-19?	120	180	40.1	59.9
Do you know an asymptomatic person can transmit the disease?	52	248	17.4	82.6
Do you have the latest information on COVID-19?	200	100	66.7	33.3
Do you know no effective drug for COVID-19?	216	84	71.9	28.1
Do you know which group of individuals are more affected?	186	114	62	38
Do you know patients without fever can transmit COVID-19 to others?	88	212	29.4	70.6
Do you know COVID-19 can be spread through respiratory droplets?	137	163	45.8	54.2
Do you believe that no prevention is required for children and adults?	179	121	59.6	40.4
Do you know that avoiding crowded places helps to prevent COVID-19?	243	57	81	19
Do you know that isolation and treatment of people who are infected with COVID-19 are an effective way to reduce the spread of the virus.	229	71	76.3	23.7
Do you know suspected individuals should be isolated in a proper place and observed for 14 days?	230	70	76.8	23.2

Attitude of the Participants Towards COVID-19

As indicated in the table below, the majority of the study participants (71.9%) believed that traditional medicines like eating garlic do not help prevent infection with the new coronavirus. About 49.2% of the study participants perceived that COVID-19 cannot affectyoung people and a high number of study participants will not go to a quarantine centre if they develop the disease. The majority of study participants perceived that the measures taken by the Uganda Ministry of Health were helpful and the country could win the battle against COVID-19.

Table 2: Shows the Attitude of the Participants Towards COVID-19

Perception Questions	Yes		No	
	Freq	%	Freq	%
Do you believe eating garlic helps to prevent infection with the new coronavirus?	84	28.1	216	71.9
Do you believe COVID-19 cannot affect young people?	148	49.2	152	50.8
Do you believe exposing yourself to the sun or temperatures higher than 25° C prevents COVID-19?	64	21.4	236	78.6
Do you believe MoH measures are helpful to combat COVID-19?	209	69.5	92	30.5
Do you have confidence that Ethiopia can win the battle against COVID-19 virus?	219	72.9	81	27.1
Do you think that you will go to the quarantine centre if you develop the sign and symptoms of COVID-19?	231	77.1	69	22.9

Practices of the Participants Regarding COVID-19

The level of poor practice in the current study was found to be 41.7%. One hundred and eighty- eight (62.5%) study participants reported that they went to crowded places. The majority (69.3%)of the respondents used a face mask when they left their home but the number of study participants who did not use a face mask is also higher. The other less frequently practised preventive measures (10.4%) were avoiding recontamination after hand washing from pipe orany other water container materials and practising physical distancing (45.1%). About 55% of study participants did not keep the recommended distance when they spoke in front of others.

Table 3: Shows the Practices of the Participants Regarding COVID-19

	Yes		No	
	Freq	%	Freq	%
In recent days, have you gone to any crowded place?	188	62.5	113	37.5
In recent days, have you worn a mask when leaving home?	208	69.3	92	30.7
In recent days, have you touched your mouth, nose, and eyes frequently?	206	68.8	94	31.2
Do you touch anyone for greeting when you get in your home/friend home/family home/working area?	188	62.5	113	37.5
Do you cover your nose and mouth with a tissue during sneezing or coughing?	251	83.6	49	16.4
Do you use soap or hand sanitiser to wash your hands continuously?	267	89.1	33	10.9
Do you wash your hands frequently according to WHO recommendations?	226	75.3	74	24.7
Do you close the pipe after you finish your hand washing to avoid recontamination?	31	10.4	269	89.6
Did you stand two meters away when you speak in front of others	135	45.1	165	54.9

DISCUSSION

A total of 300 study participants were included in this study. The mean age of the study participants was 36 years. The majority of study participants (61.5%) were males, and about 52.6% of the study participants were aged between 30 and 49 years. Regarding the residence of the study participants, most (85.2%) of them lived in urban areas. The majority of study participants (65.1%) had a tertiary level of education. This is probably because most of the participants were students. 19% had secondary-level education, 11.5% had primary-level education, and 4.4% had no formal education at all. About occupation, 153 (51.0%) of the participants were students, and 25 (8.3%) were civil servants. 69 (3.0%) were peasants or farmers. 33 (11.0%) were self-employed, while 20 (6.7%) had other occupations. Majority 94 (31.3%) of the respondents were Catholics, 82 (27.3%) were Anglicans, 23 (7.7%) were SDAs, 53 (17.7%) were Muslims, and 48 (16.0%) of respondents belonged to other religions. In this study, more than half (51.3%) of the study participants had good knowledge regarding the COVID-19 pandemic, while the remaining 48.7% had poor knowledge about the disease. This finding is different from studies conducted in Ethiopia[26] and Iran [27], which reported a knowledge score of 85% and 90%, respectively. Nearly all of the participants in these earlier studies had an academic degree or higher, and they were more likely to actively seek knowledge and take action in response to the pandemic's serious condition and the avalanche of news reports by gathering facts from dependable sources like official health-related websites. This could be the cause of the discrepancy. In addition, this study's measurement of low knowledge (48.7%) was found to be higher than those from Uganda [28], Bangladesh[29], and Brazian [30], which is primarily attributable to variations in access to electricity and the internet for using social media and other trustworthy sources of information. According to the results of the current study, the awareness of study participants regarding COVID-19 was found to be high. Media such as television and radio serve as a major source of information (73%), creating awareness regarding the pandemic. This proportion regarding the source of information on COVID-19 in the present study is higher than in another study conducted in Ethiopia [30]. This high awareness among

study participants has its roots partly in their high exposure to the information provided by the government and media about the virus since the start of the outbreak. The chief clinical symptoms of COVID-19, which include fever, cough, sore throat, muscle aches, and breathing problems, were only known by 40.1% of study participants. This percentage is low when compared to a Sudanese poll when 89.5% of participants knew the main clinical symptoms and mechanisms of transmission [31]. Furthermore, roughly 29.4% of the participants thought that COVID-19 could not spread if there was no fever. This further demonstrates the ineffectiveness of social media in raising awareness of the COVID-19 pandemic among Ugandans; for example, certain media outlets frequently overestimate the risk connected with the pandemic and frequently link the illness to merely fever ([31]. This study further revealed that only 17.4% of the respondents knew the fact that an asymptomatic person can transmit the disease, which is attributable to obsessive information-gaining habits in the country. The majority of Uganda's population was overburdened by frequent announcements and mortality reports as a result of the pandemic, yet comprehensive information from a health and medical standpoint was still insufficient, leading to a variety of opinions and ideas about the virus. The majority of respondents (72.9%) believe Uganda can prevail in its fight against COVID-19. The researchers in these earlier surveys attributed the favourable opinions to the extraordinary steps taken by their governments to stop the virus' spread (such as transportation restrictions and the lockdown of towns and counties). However, the positive attitude reported in this study is not a result of justifiable reasoning; rather, it is a result of believing that Africans are resistant to the disease, partly from religious perspectives. On the contrary, a study report from Egypt revealed that the majority (88.3%) of respondents were pessimistic and were afraid the country would not win the battle against the pandemic due to the poor quality of most Egyptian hospitals [26].

CONCLUSION

To defend oneself from this extremely infectious pandemic virus, the research group had low levels of knowledge, attitude, and preventive actions such as sufficient hand washing, forgoing handshakes, and keeping physical distance. Notably, there is shockingly little understanding of the COVID-19 epidemic, a negative perspective, and poor practice in this area, all of which need to be remedied immediately. Despite their shortcomings, social media and the internet significantly aided in the acquisition of information. Bad knowledge is strongly correlated with low educational attainment and contact with confirmed COVID-19 cases, whereas poor practice is associated with bad knowledge, low educational attainment, and travel history.

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