



MAKERERE UNIVERSITY



GOVERNMENT OF UGANDA

STUDY Summary

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Exploring children's understanding of COVID-19 and its preventive strategies in Uganda: a cross sectional study among children aged 10-13 years in Hoima District

Study Team

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About the Principal Investigator



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Background

The novel Coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is profoundly affecting lives around the world including children. In Uganda, the numbers of COVID-19 cases is exponentially raising, with a cumulative number of 11767 cases and 106 deaths as of 17th November 2020 [6]. The number of children cases in the country also continues to gradually increase. For instance, between March and June 2020, about 12 cases registered, by mid-September 2020, over 92 COVID-19 cases in children were reported by the Uganda Ministry of Health [6]. Additionally, other resulting impacts of COVID-19 have significantly threatened many more children's lives than the disease [7]

COVID-19 preventive measures such as hand washing, wearing a face mask, keeping social distance and general hygienic practices are vividly promoted through continuous risk communication [8]. However, this communication is mainly designed to adult audiences as opposed to both children and adults [9]. It is therefore not known whether children, especially the primary pupils, and / or those in rural areas, understand and adhere to the COVID-19 risk communications.

In the current event that there is no vaccine nor curative treatments, effective management of COVID-19 is largely dependent on risk-communication and prevention strategies [10, 11]. To achieve effective management of COVID-19 in Uganda, where over 50% of the population is below 18 years, it is crucial to consider and understand children's knowledge and response to COVID-19 prevention measures. This will facilitate evidence-based

KEY MESSAGES

- 1) Children are knowledgeable of COVID 19 transmission. At least seven out of ten children knew what caused COVID 19 and how it is spread.
- 2) None of the children knew how to wear face masks. None of the children followed all the recommended steps when putting on a mask and less than 1% followed the recommended steps for removing a face mask.
- 3) Also, children did not know how to properly wash their hands. Less than 3% followed the WHO recommended steps for hand washing.
- 4) The children were anxious and worried about the future. They had many unanswered questions about their future school attendance and how they would survive in the new normal.
- 5) Their recommendation or school opening entailed upholding and integrating the current preventive measures into the school system, all students boarding at schools, as well as introducing COVID committees.

strategies for strengthening and improving their safety and wellbeing are developed [12]. Besides, empowering children on how to overcome COVID-19 and enhancing their role as agents of change is of global and national interest and is urgently required given its implications in relation to reopening schools and intergenerational contacts [13]. We therefore sought to explore the children's understanding of COVID-19 and its preventative strategies in Uganda to contribute to efforts of the ongoing COVID risk-communication among children.

Methods

We conducted a cross sectional study using both quantitative and qualitative data collection methods.

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among children aged 10 to 13 years, from 18 randomly selected villages from Mparo and Bujumbura Divisions in Hoima Municipality. Quantitative data was collected among 372 randomly sampled children through face to face questionnaires and observation checklists. The questionnaire was adapted from Ministry of Health COVID 19 messages while observation checklists were based on the World Health Organization (WHO) recommended six steps of hand washing and the WHO recommended steps for wearing and removing none medical face masks respectively. We also conducted eight Focus Group Discussions (FGD), using FGD guides, among purposively selected children. The groups were homogenized by gender(boys only & girls only) and age. We sought informed consent and assent before data was collected from any child. We calculated descriptive statistics, for the quantitative data, to obtain frequencies and percentages. Qualitative analysis was conducted using a thematic approach. The emerging qualitative findings were then triangulated with the quantitative results.

RESULTS

Demographic characteristics of the participants

In the quantitative survey, 55.91% (206/372), of the participants were female, about a quarter, 26.08% (97/372), were 13 years old (teenagers) and 27.42% (102/372) were 10 years old. Nearly all, 94.35% (351/372), were attending primary level education, and three (0.81%) were not studying.

For the eight FGDs, a total of 55 children participated and all were school going. Thirty percent, (17/55), were in primary seven, 29.1% (16/55) in primary 6, 18.1% (10/55) in primary 4, 16.4% (9/55) in primary 7 while 3.6% (2/55) and 1.8% (1/55) were in primary 3 and senior one respectively.

Knowledge of COVID 19 and How it is spread

a) Knowledge of COVID

Participants in the discussion could differentiate CORONA virus from COVID 19:

"corona is the virus and COVID 19 is the disease." (Boy, 12 years).

"Corona is a virus that brings the disease COVID 19." (Boy, 13 years)

They also expressed their fear and knowledge that COVID-19 is a deadly pandemic:

"what has made me sad is many people have been dying of corona virus disease and you might find that even us it might reach here and we also follow suit" (Girl, 11 years).

b) Knowledge of COVID 19 spread

Majority of participants, 75.4% (279/37), knew that the CORONA virus is spread through droplets (Figure 1). Also, in the discussion a participant stated:

"if you gather more than the way we are here [more than 8], the corona will get you. Because you find someone might sneeze without holding their mouth and their sputum falls on you and you get infected and the other people will also get infected" (Boy, 13 years).

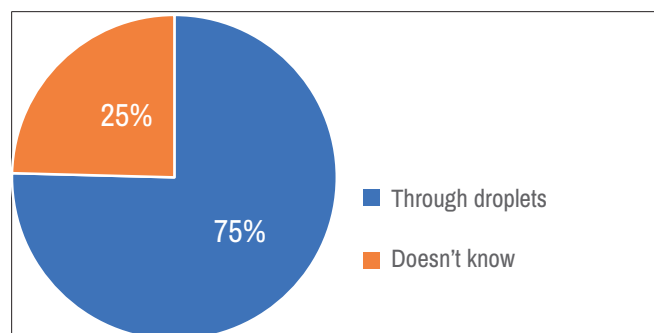


Figure 1: Proportion of children who know how CORONA virus is Spread

Knowledge of signs and symptoms of Covid-19

Eighty-five (85%) percent of the participants knew at least one symptom of Covid-19. The symptoms known by most participants were: cough, by 58.33% (217/372); other flu like symptoms, by 58.06% (216/372) and fever, by 40.59% (151/372). Only three participants knew that sudden loss of smell and taste are symptoms of covid-19 (Figure 2).

Participants in the discussion also mentioned body temperature:

"First of all, if the person's temperature is taken and it's high, the person might be having corona" (Boy, 11 years).

Also, some participants knew that a person can have COVID-19 but without symptoms:

"someone may be having corona virus and you don't know so she can spread it to others if we are close to each other" (Girl, 11 years).

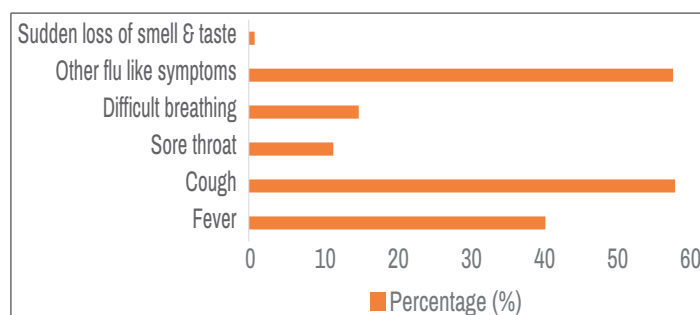


Figure 2: Proportion of children who knew the different COVID 19 symptoms

Knowledge of COVID 19 prevention measures

We measured knowledge using a likert scale. A mark was given for each correct preventative measure mentioned. A child was considered to have no knowledge if they did not identify any preventative measure, fair knowledge (3 or less measures) good knowledge (4 or more measures) Majority of participants, 82.26% (306/372) had moderate knowledge about COVID-19 prevention. Seventeen percent (64/372) had good knowledge about the prevention of Covid-19 (Figure 3).

Frequent washing of hands with water and soap" was the most known Covid-19 preventative measure by 81.99% (305) of the 372 participants. The other preventative Covid-19 measures known by at least half of the participants was "Always cover your nose and mouth with a mask when outside the home (54.57% (203/372)).

In most FGDs the participants talked about avoiding moving aimlessly, use of face masks, hand washing, avoiding touching the mouth, eyes and nose with unclean hands and avoiding hugging and shaking hands. One participant said:

"We should wear masks because the virus moves in air therefore the virus will come and stop on the masks in case someone is sneezing or talking or laughing and then the droplets gets in touch with you" (Girl 12 years).

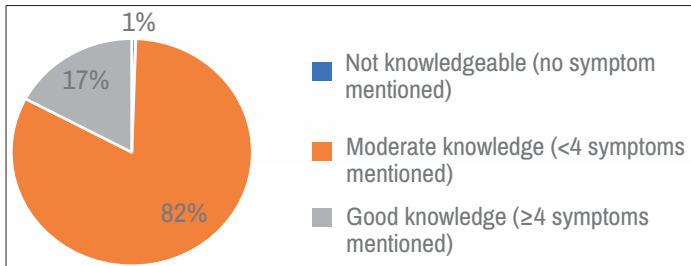


Figure 3: Knowledge of COVID 19 preventative measures

Observation of COVID-19 preventive practices

Observations for wearing and removing a Face mask

a) Wearing a face mask

None of the participants followed the all the WHO recommended steps when putting on a mask. Slightly over 22.31% (83/372) washed their hands with water and soap before touching the mask and 31.18% (116/372) avoided touching the mask surface. Eight participants did not follow any of the recommended steps when putting on a facemask (Figure 4).

b) Removing a facemask

Only two (0.54%), of the participants followed the recommended steps when removing a facemask (Figure 5).

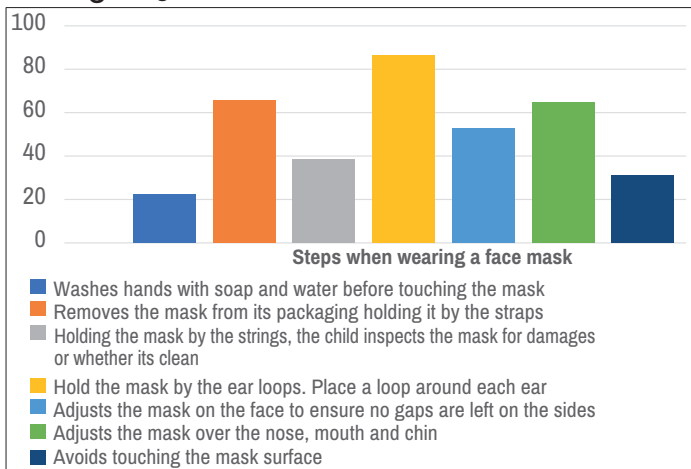


Figure 4: Proportion of children who performed the recommended practices when wearing a face mask

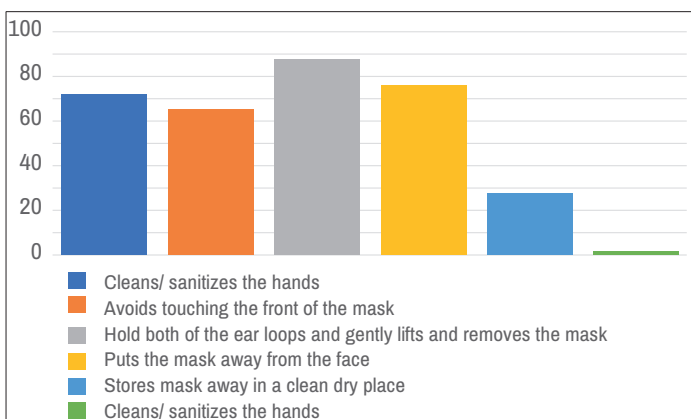


Figure 5: Proportion of children who performed the recommended steps when removing a face mask

Observations for hand washing

Only 2.15% (8/372) children were able to wash their hands correctly (Table 1).

Nonetheless, participants stated the need to implement the preventive measure of frequent hand washing:

"You might have been somewhere and you don't know that there is corona or shaking hands with a person who has corona, so you have to wash your hands so that they are clean" (Girl, 12 years).

Variable	Frequency	Percentage
Followed all hand washing steps		
No	264	97.85
Yes	8	2.15
Recommended Steps or handwashing		
Step 1: Wets hands with water.	212	56.99
Step 2: Using soap rub palms of hands together.	324	87.10
Step 3: Focuses on the nails by rubbing the tips on your soapy palm	178	47.85
Step 4: Rubs the back of your hands and in between your fingers	88	23.66
Step 5: Focuses on the thumb	43	11.56
Step 6: Washes the wrist	134	36.02
Step 7: Washes the nails	72	19.35
Step 8: Rinses hands using clean water	231	62.1
Step 9: Dries hands with a clean cloth OR leave to air dry	118	31.72

Children's experiences and interpretation of the COVID 19 lock down

Children expressed happiness that they had spent time with their families, learnt chores and slept longer than they usually did when at school. However, they stated missing school and were uncertain when schooling resumes. Due to the prolonged stay at home, some feared that they would learn bad habits like stealing, while others feared that their classmate would not return to school because they got pregnant:

"what is hurting in these corona times is that there are girls that I used to go with to school but now they are pregnant, that is bad" (Boy, 13 years).

They were also sad that their parents were not working and earning:

"why am saying this time is bad is because people are now at home and no longer working, they even fail to get money to buy salt or soap" (Boy, 12years).

Participants also stated the following as things that would bar them from practicing the preventive practices both at school and home:

- Lack of sufficient hand washing facilities at school

- The schools usually have so many students so it is hard to practice social distance.
 - Similarly, school based activities including cleaning the compound and playing may not favor use of face masks.
 - The prevailing community complacency to follow guidelines.
 - Theft of hand washing jerricans in the communities
- II) Provide enough water and soap for hand washing and a disinfectant to sanitize surfaces.
 - III) Have thermometers to take temperature for all visitors and that all persons presenting with symptoms be taken away.
 - IV) Form COVID committees to ensure that the students uphold the preventive guidelines.

They also recommended that all schools:

- I) Be turned into boarding to prevent importation of COVID 19 into the school environment

Implications for COVID 19 prevention among children

The focus on COVID 19 prevention among children aged 10-13 years should focus mostly on how children can correctly perform the COVID 19 preventive measures.

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