Asian Journal of Medicine and Health

19(12): 92-107, 2021; Article no.AJMAH.77847
ISSN: 2456-8414

Market Vendor's Poor Adherence to Sops for COVID-19: A Potential Source for Transmission of the Virus to the Local Communities. A Case Study of Sironko District

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Authors' contributions

This work was carried out in collaboration among all authors. Author AK, AW conceived the research idea, participated in the data collection & analysis and in writing the primary draft of the manuscript. Authors SAO, MSM, SN, DW, and JW participated in data collection, advised on data entry plan and were major contributors in writing this manuscript. Authors HMK and EJS were the senior advisors and supervisors in the study were major contributors in writing of the manuscript and performed final editing of the manuscript. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJMAH/2021/v19i1230420
Editor(s):
(1) Dr. Janvier Gasana , Kuwait University, Kuwait.
(2) Dr. Ashish Anand, GV Montgomery Veteran Affairs Medical Center, USA.
Reviewers:
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Complete Peer review History, details of the editor(s), Reviewers and additional Reviewers are available here: https://www.sdiarticle5.com/review-history/77847

Original Research Article

Received 15 November 2021
Accepted 18 December 2021
Published 19 December 2021

ABSTRACT

Introduction: COVID-19 is one of the huge health burdens on the earth in the recent times. Massive campaigns on the adherence to standard operation procedures (SOPs) have been emphasized by the Government of Uganda and even the county has been put in two lockdowns to

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curtail the spread of this disease. Despite all these efforts, market vendors in Sironko district have seemingly not complied with these SOPs and this makes them potential hotspot for disease transmission, but no qualitative study has so far been documented. Therefore, the current study investigated the adherence of SOPs for COVID-19 amongst market vendors in this area.

Methodology: A qualitative survey research design was adopted and a total of 53 participants, selected by both purposeful and simple random were involved. Interview, focus group discussion and observations techniques were used in data collection. The date was analyzed by the statistical software called MedCalc, version 20.0008

Results: The result showed that 65 % were females, most were aged between 29 females aged between 31-40 year took part in the study contributing 55% to the total subjects and married and of which 37 (70 %) were married. The market experienced challenges of inadequate & inappropriate facilities for SOPs but water was abundant (45, 85 %). All the SOPs for COVID-19 were flouted in these markets.

Conclusions: Market vendor rarely adhered to SOPs for COVID-19 and this makes them a potential source for transmission of COVID-19 to the local communities in the entire sub-regions. Therefore, there is need for department of production in Sironko district to re-enforce observance to SOPs guidelines for COVID-19 in this area.

Keywords: COVID-19; SOPs; market vendors; Sironko district; alcohol-based sanitizer; hand-washing facilities; handshaking & hugging.

1. INTRODUCTION

Globally, COVID 19 (SARS-CoV-2 *)*- is one of the deadliest and contagious disease that has caused a huge health burden in the recent times [1]. According to [2,3] coronavirus disease is currently the leading cause of deaths in the United States and it has surpassed mortality rates from all cardiovascular and other respiratory diseases. Coronavirus disease is believed to have originated from Wuhan city of China and rapidly spread to Europe and became more pronounced in Italy with 110,574 and 13115 cases and deaths respectively by April, 2021 [4]. Due to this rapid transmission across country borders, on 11th March, 2021 the WHO declared it a pandemic [5]. Currently a total of number of cases and death due to COVID -19 are 191, 773,590 and 4,127,963 respectively [6]. Recent studies have indicated that America has the highest number of cases (75,220,757) and of which 33,120,632 (47.6 4 %) are in the United States which is higher than Africa, and Europe combined [5] . The latest cases of COVID-19 in Africa are, 4,688,762 and South Africa has registered the highest incidences and deaths of 2,327,472 cases and 68,192 respectively [7]. In East Africa, Kenya has the highest number of cases and deaths of; 194,310 and 3,811 cases respectively and 91,162 cases and 2,425 deaths in Uganda [7]. The actual number of cases in Sironko district is not yet known and is difficult to establish due to lack of COVID-19 registries. However, informal interviews with COVID task force and health workers at Mbale Regional Referral Hospital (MRRH) indicates a rising number of new cases and deaths in this area.

The available scientific evidence has proved that the predominant mode of transmission of human-to-human SAR-CoV-2 is through respiratory cough droplets or sneezing of the infected person. Further still, studies of isolated patients of COVID-19 in hospital wards have reported natural SAR-CoV-2 RNA contaminations of commonly used items, surfaces, outdoor environment, air samples contaminated by airborne droplets are the main transmission COVID-19 modes and aerosols particles were the least [8]. Fever, fatigue, mylagia and dry cough were highly cited as the most signs & symptoms of COVID-19 patients. Other signs and symptom cited were arches and pains, nasal congestions, cold, sore throats, dyspnea and dry cough, muscle arches, chills, headaches, trembling, and loss of smell and taste have been documented as major signs & symptoms of Coronavirus disease (Adam, 2020 #2). These symptoms have been proved to take average of 3 -7 days manifest themselves in the patient from the time of contracting the disease; but it may even take up to 14 days under certain circumstance.

Based on knowledge of transmission modes of COVID-19, the World Health Organization (WHO) setup Standard Operating Procedures (SOPs) to curtail its spread that were adopted by individual governments including that of Uganda [9]. The SOPs mainly called for change in

personal hygiene and social behaviors [9]. These includes; avoid handshakes, hugging, washing hands more frequently with soap or sanitizing, putting on face masks when walking through crowded or public places, social distancing, keeping room well ventilated, coughing in bent elbow or tissues [10]. In Uganda, like other states in the world, other stringent and costly protection measures have also been put in place like imposing lockdown (s), quarantine and night curfews to further limit the spread of the scourge amongst its masses [10,11]. Earlier study revealed that market vendors in Sironko district adhered to all the COVID-19 SOPs set-up by Government of Uganda as adopted from the WHO [9]. However, their findings were only based on questionnaires and interviews and so similar study based on qualitative methods needs to be conducted to verify those earlier claims. Therefore, the current study addressed the level of adherence to SOPs for COVID-19 amongst the market vendors in Sironko district based on qualitative methods of focus group discussions and observations.

2. METHODOLOGY

2.1 Study Area

Sironko district is situated within the geographical coordinates of 1’10 N &1’20 N and 34’15 E & 34’32 E respectively and lies at average elevation of; 3996 ft (1,218 above sea level (Google Map, 2020). Sironko is 24.7 km from Mbale city and 275.9 km Kampala, the Capital city of Uganda (Fig. 1). The study was carried out in total of four markets in Sironko district and included; Mutufu, Gombe, Pato & Buteza markets out of eighty markets. These markets were selected because they are believed to be the busiest which collects different categories of trader from within and neighboring districts and even beyond gather most especially on the designated market day(s) of the week of Friday, Tuesday, Wednesday & Thursday respectively. But information on adherence to SOPs guidelines for COVID-19 has not been documented and thus, is a paramount question for an investigation.

2.2 Selection of the Study Sites

We conducted a reconnaissance survey in our study area between the months of March to April 2021. The study sites were selected basing on the advice of District Production Officer (DPO), Sub- County chiefs (SCs) and Community Development Officers (CDOs). A total of four markets were selected and these included: Mutufu & Gombe markets from Budadiri East and Pato and Buteza markets from Budadiri West out of eight markets in the districts. These markets were selected purposely because they are busiest in this district in the so could key give a reflection reflect in markets in this area. Nonetheless, no clear qualitative study based on interview, focal group discussion (FGDs) and observations have been documented to verify adherence to SOPs for COVID-19. Therefore, we conducted our study on the adherence to SOPs for COVID-19 among market vendors in Sironko district.

2.3 The Map of Elgon Sub-region with Location of Different Districts

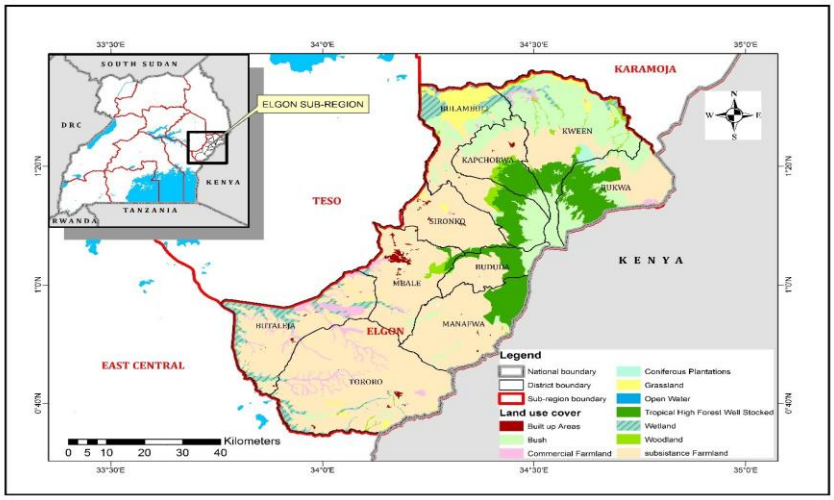

Fig. 1. Map of elgon region with locations of different districts

2.4 Study Area

The area has total population of 1.12 million people representing 4.8 % of the total Uganda's population [12]. The total residential occupants in Sironko are 242,422 as per 2014 National Population and Housing Census [12]. The main tribe are Bagisu who are mainly peasants, and it is the 7th largest ethnic group in Uganda [12].

2.5 Study Design

The present study adopted qualitative descriptive cross-sectional survey and data was collected from a specific group, at one point in time [13]. It was designed to assess socio-demographic data, availability of SOPs facilities for COVID-19 and level of adherence of SOPs.

2.6 Study Population

The study population comprised of executive committee members and all other categories of market vendors who were above 18 years old and were well conversant with local language (Lumasaba) and were traders in those respective market.

2.7 Selection of Participants and Sampling Techniques

A total of 53 participants determined by redundancy criterion where the sample size was determined by saturation point of the responses were generated. A total of attained at a total of 53 (34 females and 19 males) who were involved in this study. Out of which eight (8) were market executive committee member who were purposively selected since they are key informants in our study. The rest of the participants were selected by random sampling technique, and this minimized bias as much as possible. Eligible participants included men and women of 18 years above and were conversant with local language (Lumasaba). We excluded participants with communication challenges, those below 18 years old and those who were not mentally coordinated well.

2.8 Data Collection

Pretested interview guides comprising of open-ended questions were prepared. The question items were made up of three sections: demographic data, availability of SOPs facilities for COVID-19, and adherence to SOPs for COVID-19 in this area. We crosschecked the questionnaire items for consistency, relevancy, clarity and ambiguity before prior to its administration to the respondents. Prior to any form of data collection verbal consent was sought from the respective participant. We caried out an in-depth interview with eight (8) executive committee members. Focus group discussion (FGDs) was also conducted with seven group each comprising of five individuals. In each FGDs or interview session, there was a notetaker who was very conversant with both English and local language (Lumasaba). We also as well observed the adherence of market to social distance, wearing of masks and availability & handwashing facilities and photographs were taken where possible after a verbal consent of the concerned participants.

2.9 Data Analysis

Qualitative data was analyzed following procedure previously described by [14] & [15] who contends that data analysis and collection must be a simultaneous process in qualitative research. The field notes from structured items of the questionnaires were analyzed with closed end item. Then, the notes were entered in the excel and exported into the MedCalc version 20.008 which generated frequency tables and information was presented in form of table and figures. The data was analyzed for three themes which included social demographic information, availability of SOPs facilities for COVID-19 and level of adherence to SOPs. Themes were intertwined within the theoretical model of Health Belief Model (HBM) that informed our study. The theoretic model adopted in the current study was designed by Hochbaum (1958) and Rosenstock (1960) as cited in Health Behaviour & Health Education book by [16] (see attached Fig. 2& 3 supplementary information).

3. RESULTS & DISCUSSIONS

3.1 Results

The study that was carried out during the months of March to April 2021, and a total of fifty-three (53) participants were involved and qualitative research design was adopted. Field notes from focused group discussions (FGDs) and interview guides were explained based on the Health Belief Model (HBM) as developed by Hochbaum (1958) and Rosenstock (1960) and cited in Health Behaviour & Health Education book [16]. The analyzed information was presented in tables and figures. Photograph were also taken

where possible as a verification of the results generated from FGDs and interviews.

3.2 Socio-Demographic Characteristics

The results indicate that majority of the respondents were females (34. 65 %). Most participant were aged between 31-40 years (29, 55 %) and the least were 61 years and above (3, 5 %). It was also found out that 90 % of the participants were Ugandan and the non-Ugandan were with identified nationally of Kenyan, Tanzanian & Sudanese. In term of marital status, majority of participants were married (37, 70 % and so were considered responsible citizen to give reliable and valid content for this study. Further still, the findings indicated that most participants were secondary school dropouts (39, 73 %). Therefore, majority of the participant in this study were of low literacy class.

3.3 Availability of Facilities for Implementation of SOPs

There were interesting and surprising outcomes on the issue of recommended facilities required for SOPs implementation of SOPs for COVID-19. Only reliable and adequate source of water was highly acceptable to be readily available by most of the respondents (45, 85 %). The rest of the facilities were highly wanting as all the responses scored below the average of acceptance. Therefore, on this basis it highly doubtable that these market vendors adhere to the recommended minimum standard of SOPs that can curtail the transmission of this disease.

3.4 Wearing of Face Masks

We also found out that 63 % of the respondents admitted that they wore masks in public & crowded places as recommended by Ministry of Health [5]. However, data generated from observation results yielded otherwise. On this basis, therefore, it is difficult to a draw a meaningful that conclusion that market vendors in this area follow the government directive of wearing facemask in public & crowded places.

3.5 Regular Washing of Hands or Sanitizing with Alcohol Based-Sanitizer

Though there were some indicators of handwashing amongst market vendors in this area as it was manifested by some handwashing facilities (Plates 4 &5). But surprisingly, the results indicated that the frequency of practicing this was far below that recommended standards by Ministry of Health [5] to curtail the spread of coronavirus disease. Only 8 % of the respondents revealed that they tried to either wash their hand with soap or sanitize 24 times every day, an average of 30 minutes which is within the recommended standard by MoH. Therefore, market vendors in this area exhibited less commitment handwashing and so, any outbreak, could easily spark in the communities.

Table 1. Socio-demographic Characteristics

Characteristics		Frequency	Percentage (%)
Gender	Male	19	35
	Female	34	65
Age (years)	18-30	05	10
	31- 40	29	55
	41- 50	07	13
	41 -50	04	08
	51-60	05	10
	61 above	03	05
Nationality	Ugandan	48	90
	Non-Ugandan	05	10
Marital status	Married	37	70
	Single	03	05
	Divorced	05	10
	Widows	08	15
Education	None	07	13
	Primary	05	10
	Secondary	39	73
	Tertiary	02	03
	University	02	03

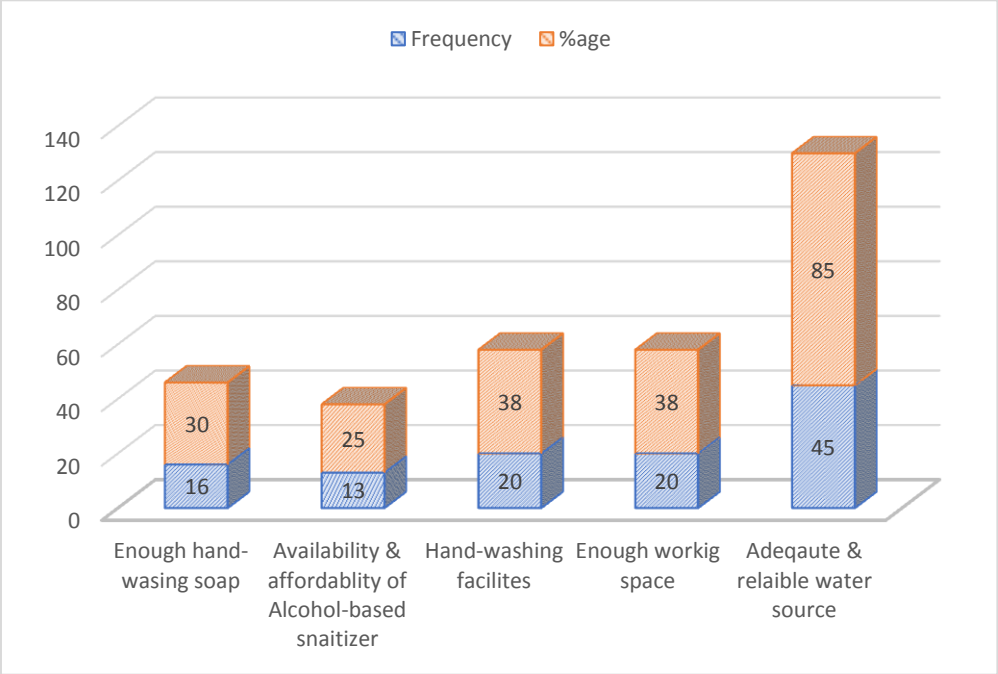

Fig. 2. Availability of facilities for implementation of SOPs

Table 2. Wearing of face masks

Wearing facemask	Frequency	% age
Yes	33	63
No	20	37
Total	40	100

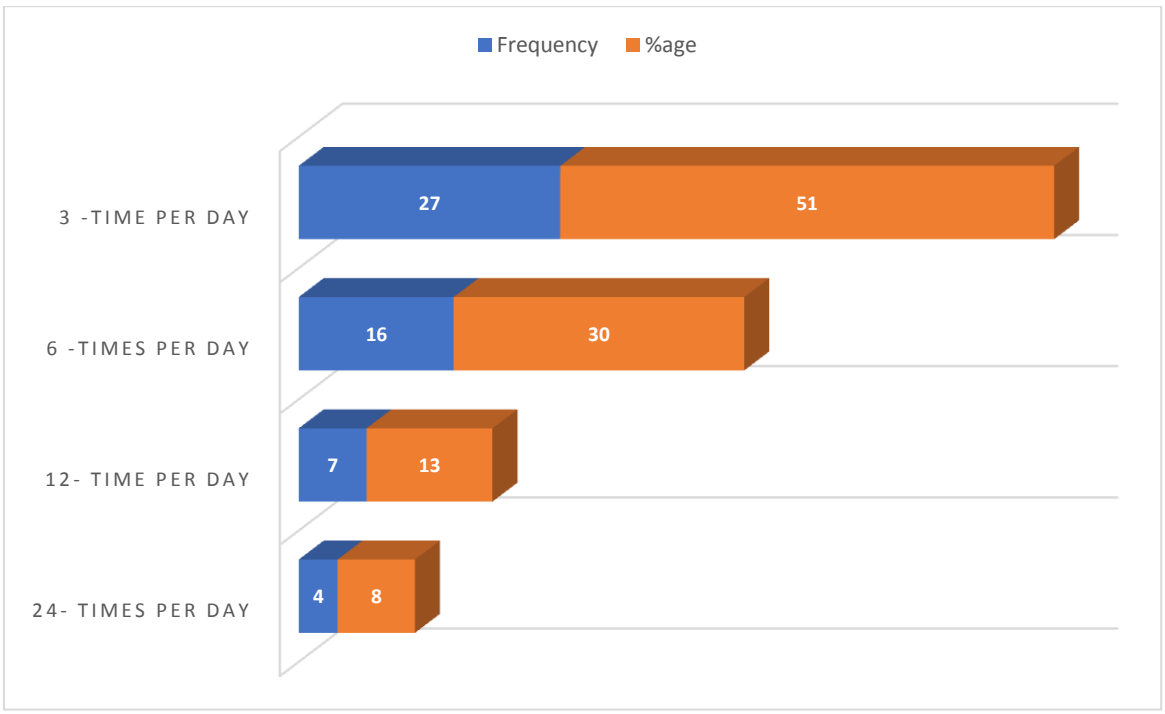

Fig. 3. Regular washing of Hands or Sanitizing with Alcohol Based- Sanitizer

3.6 Observing Social Distance

The finding once again indicated that majority of market vendor rarely respected the prescribed social distance of at least 2 meters from each other. This was attributed to limited working space of the market, negligence and partly less commitment of the market authorities to implement the adherence to these SOPs. Most of the participant (33, 63 %) suggested that they could keep less 1 meter apart at their workplace. Therefore, in the in respect these market vendors do not adhere to social distancing, and this combined with less adherence to facemask and overcrowding could easily spark the disease transmission.

3.7 Avoiding Handshaking and Hugging

Majority of the participants (28, 70%) could not avoid handshaking and hugging as it was inevitable to their social life. Such cultural behaviour combines with less committed to social distancing and wearing facemask give an upper-hand on the escalation the spread of this disease.

Table 3. Avoiding handshaking and hugging

Handshaking & Hugging	Frequency	% age
Yes	16	30
No	37	70
Total	40	100

3.8 Coughing under the Elbow or Tissue or Handkerchief

Table 4. Coughing under the elbow or tissue or handkerchief

Protected Cough	Frequency	% age
Yes	13	25
No	40	75
Total	40	100

It was a rare occasion to finding market vendors in this area coughing under elbow or tissue of handkerchief as majority of the respondent (30, 75%) refuted this idea. Therefore, with less observance, to social distances and not wearing facemask makes these place hotspots for rapid COVID-19 transmission.

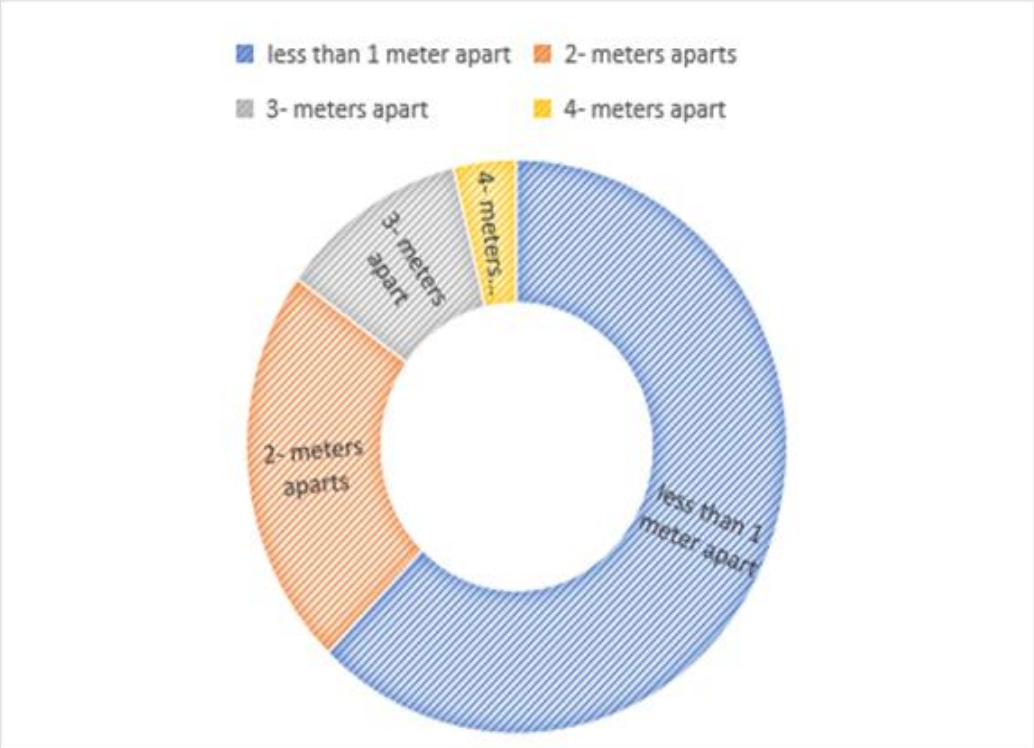

Fig. 4. Observing social distance

3.9 Observation

3.9.1 Market vendors at Mutufu market

Plate 1. Market Vendors at Mutufu market

3.9.2 Market vendors at Buteza market

Plate 2. Market Vendors at Buteza market

3.9.3 Market vendors at Pato market

Plate 3. Market Vendors at Buteza market

As seen from the above Plates [1, 2&3], there was a clear manifestation, that market vendors in this rarely observed SOPs for COVID-19. The market vendor did not observe the minimal recommended distance, and there as minimal limited evidence if any for wearing masks, despite the fact that the market had registered 4 cases which could easily lead to community transmission. Therefore, with all these observed practices there is no doubt that declaring these area hotspots for community transmission not only in this district but the sub-region as well in case of outbreak.

3.9.4 Hand-washing facilities at Buteza market

Plate 4. Hand-washing facilities at Buteza market

3.9.5 Hand-washing facilities at Mutufu market

Plate 5. Hand-washing facilities at Mutufu Market

The local executive committee members of the respective markets hand endeavored to put some washing facilities at their market. However, even those washing facilities improvised were far below the recommended standard instead could be contaminate especially for large population at these markets and hence disease spread.

3.9.6 Boda-Boda stage at Mutufu market

Plate 6. Boda-Boda Stage at Mutufu Market

Just like the market vendors, the boda-boda riders at respective market stages rarely observed SOPs for COVID-19 nor normally observed wearing facemask. By the nature of their job, without observing the SOPs they are highly vulnerable in contracting and rapidly spreading this disease to the rest of the masses within this district and the entire sub-region.

3.10 Discussion

The results of indicated that the participants in present study were of low literacy class as majority (29, 55 %) were secondary school dropout (Table 1). This gives room for inappropriate responses especially on technical components in the interview guides or FGDs. Therefore, there is a likelihood of leaving some gaps in knowledge which could warranty a similar study in the area using other methods of data collection that could be more appropriate for this kind of study population. The current study is in line with the study conducted by [17] unveiled that the relevance and reliability of the data in research is largely determined by the education status of the respondents. Further still a report made by [18] also strengthened that education status plays a role in enhancing individuals in accessing information and this had a direct and indirect bearing on the research outcomes.

There were interesting outcomes on the adequacy and availability of facilities recommended for SOPs implementation for COVID-19. The only facilities that were highly admitted by 85 % of the respondents was water (Fig. 1and Plates 4 & 5). All other facilities averagely scored far below the recommended standard to implement the SOPs for COVID-19. The availability of adequate water could be explained to the facts that these areas lie within the slopes of mountain Elgon where many streams flow from it to the lower part and so ensure enough and adequate supply of water in most parts of this district. Similarly conducted (Abdul, 2021 #78) opined that adherence to SOPs in rural district of eastern Uganda has been hampered by inadequate facilities and so risk the expedition of disease transmission its outbreak. Elsewhere, study conducted in Pakistan also reported that lack of necessary facilities both in the hospital and homes had renders implementation of SOPs for COVID-19 fruitless and thus explained why spread what at rampant in this area. Further still, findings by [19] also revealed the importance of hand washing. The high spread COVID-19 disease has been

associated with lack of hand washing facilities or even those with them are inappropriate.

Some of the responses generated from interview and FGDs were as follows:

> *"I generally don't have money to buy the thing soap and sanitizer to stop sickness of the from Chinese disease, but I have the will to implement since I fear the disease from what I hear"*
>
> *" I am much aware the corona is there but we don't have enough sanitizer in our market, maybe we use local brew alcohol (waragi) because it also make from waragi"*
>
> *"We have enough water and handwashing facilities like drums with jug for fetching water from it. But I rarely do I see soap in this market purchased by our local leader but are so inconveniencing to us and so some of us can't to implement them."*

These responses could be explained by the construct of HBM of the perceived barrier that states that;

> ***Perceived barrier:*** *"The potential negative aspects of a particular health action perceived barriers may act as impediments to undertaking recommended behaviors. A kind of nonconscious, cost-benefit analysis occurs wherein individuals weigh the action's expected benefits with perceived barriers "It could help me, but it may be expensive, have negative side effects, be unpleasant, inconvenient, or time-consuming." Thus, "combined levels of susceptibility and severity provide the energy or force to act, and the perception of benefits (minus barriers) provide a preferred path of action"*

We also found out that 63 % of the respondents admitted that they wore facemasks masks in public response as a government directive (Table 2). However, the observation result did not occur with this particular outcome as the photographs taken clearly indicated that most market vendors rarely put on facemask during their designated market days (Plates 1, 2,3 & 6). This alone worsens the already fragile situation of less commitment to handwashing with soap or sanitizing frequently. This combined with other COVID-19 risk factors of not observing the recommended social distance makes this market perfect and potential hotspot for the disease spread. Facemask have been highly cited to serve a dual infection prevention to oneself from getting infections and as well protecting others. Therefore, less commitment to wearing of facemasks rapidly fuels the spread the is diseases to the masses [20]. Also studies by (Zahra, 2021 #90) revealed that wearing of facemasks for quite a long history in their use for prevention of spread respiratory diseases and coronavirus disease cannot be exceptional.

The following responses were raised by the participants:

> "*I hear that this disease can be spread in big crowd, so I fear to go there because I was told by a friend-on phone that it is a painful disease"*
>
> *" I normally want to cover my nose and mouth but I find it difficult because I am not used to this kind of life"*
>
> *" In this market most people have facemask but only put it once someone with suspicion of flu come to you or if authorities move around to re-enforce the COVID-19 guideline"*

The above responses can be explained by the construct of perceived susceptibility, perceived benefit, perceived barrier, and perceived severity in HBM as stated below;

> ***Perceived susceptibility:*** *"explains that people will be more motivated to behave in healthy ways if they believe they are vulnerable to a particular negative health outcome. The personal perception of risk or vulnerability has been found to be an important perception in promoting the adoption of healthier behaviours"*
>
> ***Perceived Severity: "****Refers to how serious an individual believes the consequences of developing the health condition will be. It deals with an individual's subjective belief in the extent of harm that can be caused from acquiring the disease or unhealthy state, because of a particular behavior. An individual is more likely to take an action to prevent gaining weight if s/he believes that the possible negative consequences,*
>
> ***Perceived benefit:*** *"Even if a person perceives personal susceptibility to a serious*

health condition (perceived threat), whether this perception leads to behavior change will be influenced by the person's beliefs regarding perceived benefits of the various available actions for reducing the disease threat. Other non-health-related perceptions, such as the financial savings related to quitting smoking or pleasing a family member by having a mammogram, may also influence behavioral decisions. Thus, individuals exhibiting optimal beliefs in susceptibility and severity are not expected to accept any recommended health action unless they also perceive the action as potentially beneficial by reducing the threat.

Perceived barrier: *"The potential negative aspects of a particular health action perceived barriers may act as impediments to undertaking recommended behaviors. A kind of nonconscious, cost-benefit analysis occurs wherein individuals weigh the action's expected benefits with perceived barriers "It could help me, but it may be expensive, have negative side effects, be unpleasant, inconvenient, or time-consuming." Thus, "combined levels of susceptibility and severity provide the energy or force to act, and the perception of benefits (minus barriers) provide a preferred path of action."*

Only 8 % of the respondents revealed that they tried to either wash their hand with soap or sanitize after 24 times a day, averagely after 30 minutes daily and this is within the recommended standards by the MoH (Fig. 2). Thus, is worthy meaningful to conclude that market vendors in this area were so reluctant as far and handwashing with soap or sanitizing were concerned. This, increase the risk of viral spread most especially with already existing cultural behaviors like handshaking and hugging which were found common practices among the masses in these markets (Plate 5). Less commitment to handwashing can be attributed to inadequate and inappropriate handwashing facilities such as soap and sanitizer and other cultural set-up within the masses were the most likely barriers. Unlike the study undertaken in United states [21] where it was observed that 93.4 % of the US citizens exhibited high degree of hygiene practices. However, they also noted their level of practice varied with age, sex, and social class. For example, their findings also revealed that men and younger respondents, most especially those of lower incomes and education level registered low adherence to SOPs as compared to their counterparts. Even when such a situation is worse in developing area of the world like Sironko district Vo *et al* (2020) carried a study in Wuhan and recommended frequent handwashing was one of the most effective personal protective manners in reducing the risks of corona transmission. Therefore, if this practice is not adhered to as it was a common practice found among the market vendors in Sironko district thein the risk of transmission of this disease are highly increased [22].

Some of the documented response in this regard were;

"*I wash my hand like six time a day but most frequently after visit the toilet because I was taught like that at school".*

"I wash my hand several times I cannot count them in the day because I was told by doing so, I can stop getting the China disease."

"I wash my disease, but I have never sanitized, may be let government encourage us to use waragi instead of sanitize because they are the same"

"I do see a relationship between the disease with passes through the nose and mouths with handwashing spread".

" I wash my hands as long as there is something to eat, but otherwise I don't."

"I wash my hand everyone hour with or with soap since or have enough water, so I have nothing to lose."

I wash my hand as many times as I can it can even be more than thirty times."

On basis of the above response perceived susceptibility and perceived benefit as stated below;

Perceived susceptibility: *"explains that people will be more motivated to behave in healthy ways if they believe they are vulnerable to a particular negative health outcome. The personal perception of risk or vulnerability has been found to be an important perception in promoting the adoption of healthier behaviors"*

> ***Perceived benefit****: "Even if a person perceives personal susceptibility to a serious health condition (perceived threat), whether this perception leads to behavior change will be influenced by the person's beliefs regarding perceived benefits of the various available actions for reducing the disease threat. Other non-health-related perceptions, such as the financial savings related to quitting smoking or pleasing a family member by having a mammogram, may also influence behavioral decisions. Thus, individuals exhibiting optimal beliefs in susceptibility and severity are not expected to accept any recommended health action unless they also perceive the action as potentially beneficial by reducing the threat*

Social distance amongst market vendor scored less as 51 % of the participant suggested that they could keep hardly keep 1 meter distance (Fig. 3 and Plates 1, 2, 3 % 6). This alone show that market vendors in these markets work in a so proximity contrary the to the recommended minimal distance. Worse of it all they exhibited less commitment to wearing facemasks and as well handshaking and hugging are clear indicators that almost all the SOPs for COVID-19 are violated in these markets. Therefore, is it not surprising for this disease to surge among local communities including Sironko district and the entire sub-region in case of any single outbreak. These close with each is a cultural barrier most especially among the local who are so tied to the cultural taboo that distancing from each other result into weakening the brotherhood bond. A related study conducted in Europe indicated that increasing social distance quartile significantly reduced the spread of coronavirus disease from 0.9 % to 0.3 % and 1.7 % to 0.7 %. This is because COVID-19 is an airborne disease spread that finds itself into the respiratory tract though the nasal and mouth opening thus, closeness of individual is a high a risk associated factor for the spread of this disease [23]. Therefore, if this Sops is compromised, then transmission surge is most likely to be experienced in this area. Social distance was cited by [24] as one of the core SOPs for COVID-19 and so it's less observance could sparks off rapid spread of this deadly viral disease.

> *" It really difficult so in our culture to distance from each other because it a taboo and in some of our clans it is punishable by clan leader".*

> *Actually, I prefer to work in close proximity with my fellow traders because we share a lot and this avoid boredom and strengthen our love and mercy for each other attain other business plans as well"*

> *"I don't what will done to me to social distance because I prefer to six in close proximity all the time with opposite sex".*

> *"For me, I can't do that because I enough alcohol so, COVID-19 disease can't affect me"*

The above response can be explained by the following constructs in the HBM which are stated below;

> ***Perceived benefit****: "Even if a person perceives personal susceptibility to a serious health condition (perceived threat), whether this perception leads to behavior change will be influenced by the person's beliefs regarding perceived benefits of the various available actions for reducing the disease threat. Other non-health-related perceptions, such as the financial savings related to quitting smoking or pleasing a family member by having a mammogram, may also influence behavioral decisions. Thus, individuals exhibiting optimal beliefs in susceptibility and severity are not expected to accept any recommended health action unless they also perceive the action as potentially beneficial by reducing the threat.*

> ***Perceived barrier*** *"The potential negative aspects of a particular health action perceived barriers may act as impediments to undertaking recommended behaviors. A kind of nonconscious, cost-benefit analysis occurs wherein individuals weigh the action's expected benefits with perceived barriers "It could help me, but it may be expensive, have negative side effects, be unpleasant, inconvenient, or time-consuming." Thus, "combined levels of susceptibility and severity provide the energy or force to act, and the perception of benefits (minus barriers) provide a preferred path of action"*

Majority of the participants (37, 70 %) could not avoid hand shaking and hugging as their cultural and usual way of lifestyle (Table 3). Therefore, when the SOPs have been put in place by the MoH, it has hardly changed most of the social cultural set-up. Less commitment to avoiding

shaking and hugging comprise the effort of coronavirus disease implement and put a huge risk of contracting and spreading this disease and as well. This is further worsened by other practices like infrequent in handwashing with soap or sanitizing which gives chances for this virus to accumulate in their hands and surface including commodities and so, increase the potentiality of its spread in the local they the local communities [25].

> "*In our culture shaking hands and hugging is difficulty to abscond because it a sign of reconciliation after long term dispute."*
>
> *" To me I do not see the problem with hugging because this disease is spread through air."*
>
> *" In this market shaking hands and hugging is a common practice the time you meet a friend or relative after a long time"*

The can be explain using the HBM as follows

> ***Perceived benefit****: "Even if a person perceives personal susceptibility to a serious health condition (perceived threat), whether this perception leads to behavior change will be influenced by the person's beliefs regarding perceived benefits of the various available actions for reducing the disease threat. Other non-health-related perceptions, such as the financial savings related to quitting smoking or pleasing a family member by having a mammogram, may also influence behavioral decisions. Thus, individuals exhibiting optimal beliefs in susceptibility and severity are not expected to accept any recommended health action unless they also perceive the action as potentially beneficial by reducing the threat.*
>
> ***Perceived barrier***
>
> *"The potential negative aspects of a particular health action perceived barriers may act as impediments to undertaking recommended behaviors. A kind of nonconscious, cost-benefit analysis occurs wherein individuals weigh the action's expected benefits with perceived barriers "It could help me, but it may be expensive, have negative side effects, be unpleasant, inconvenient, or time-consuming." Thus, "combined levels of susceptibility and severity provide the energy or force to act, and the perception of benefits (minus barriers) provide a preferred path of action.*

As seen from the above Plates (1,2,3 & 6) it is a clear manifestation that market vendor in this rarely reared observed the SOPs for COVID-19. The market vendor did not even observe the minimal recommended distance of about 2 meters apart and there was little evidence of evidence if any of wearing masks. So, in case of any outbreak of COVID-19 in this area is it not surprising for its rapid spread. With less adherence to the SOPs there is likelihood of fueling rapid spread of COVID-19. The above plates indicates that market vendor rarely put on facemasks and as well don not adhered to the required distance. These detrimental behaviors combine with less commitment to handwashing or sanitizing alongside with handshaking and hugging clearly indicate that vendors have almost ignored all the SOPs set-up by the government. Therefore, it would not be a surprise for rapid disease transmission in this district in case of any outbreak since these are collection of people from the allover the region and even beyond [26]. A study conducted by washing hand several times and social distance with others were highly recommended to be effective in the deterring and prevention of coronavirus disease.

It was a rare occasion to finding market vendors in this area coughing under elbow or tissue of handkerchief as majority of the respondent (30, 75%) refuted this idea. Therefore, with less observance, to social distances and not wearing facemask makes these places hotspots for rapid COVID-19 transmission. The results revealed by [27-28] documented SAR-CoV-2 is respiratory disease which easily spread through the respiratory tract. Therefore, use cough under the elbow or tissue greatly reduces transmission rate to others. Further still, a study conducted in Korea unveiled a combination of protected coughing and wearing are potential key player in reducing spread of COVID-19 disease [22].

4. CONCLUSIONS AND RECOMMENDA-TIONS

A total of 53 participants were involved in the present study of which 65 % were female. Most participants (29, 55%) were aged between 31-40 year (29, 55%) and were of low literacy class (73% secondary school dropout). Markets in this area were characterized by inadequate and inappropriate facilities for implementation SOPs

for COVID-19 and only water was in abundancy (45, 85%). Despite all the different COVID task forces at national and district levels that have been put in place by the Government of Uganda, all the SOPs among market vendors have been flouted. It was also noticeable that some cultural practices had undermined avoidance of handshaking and hugging and so are likely potential hotspots for COVID-19 transmission to the local communities. Therefore, there is need for local authorities within this area to form COVID-19 market sub-committees and also subsidize on all the facilities that used in the implementation of COVID-19 SOPs among these market vendors or otherwise risk disease rapid community transmission.

CONSENT

We explained the purpose of the study to the respondents, provided oral informed consent and signed applied thumb print to register the participants in our study. In addition, verbal permissions were obtained from participants to allow the auto-recording of discussions and finally uniform transport refund was provided for all the participants.

ETHICAL APPROVAL

Approval for this study was provided by the Islamic University in Uganda, Research Review Committee with approved ERA ID Number: *RCC/2021/GROUP2/2020*. Permission to access the communities was obtained from Sironko and Bulambuli districts Local leaders including LC1 Chairpersons of the respective villages.

AVAILABILITY OF DATA AND MATERIALS

Data sets generated and analyzed during this study are available from the corresponding author on reasonable request.

SUPPLEMENTARY MATERIALS

Supplementary material is available in the followinglink:https://www.journalajmah.com/index.php/AJMAH/libraryFiles/downloadPublic/11

ACKNOWLEDGEMENT

We acknowledge the administration of the Islamic University in Uganda (IUIU) in partnership with Islamic Development Bank (IDB) for their financial and moral support towards the success of this work.

We also acknowledge and express our gratitude to the Dean Faculty of Health Science and Dean Faculty of Science of the Islamic University in Uganda for their administrative, physical, and moral support rendered to us during the whole process of the article write-up.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
https://www.sdiarticle5.com/review-history/77847