

# Religion Influences Community Adherence to COVID-19 Guidelines in Uganda

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## Short Report

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# Abstract

## Background

Success of public health government programs depends on effective partnerships between religious institutions, policy makers and medical professionals. Directives from the World Health Organization (WHO) against social gatherings to control COVID-19 transmission have negatively impacted religious-political partnerships. Compliance of rural communities to national lockdowns requires support from community faith leaders. Across the African sub-continent faith plays an important role within communities that display diverse religious practice. Specific guidelines to prevent community transmission and spread of novel coronavirus 2019 (COVID-19) are however, scarce, complicating adherence to best practice as defined by the World Health Organization (WHO). During the Ebola epidemic in Africa, faith groups played a crucial role in spreading information from the WHO to control community disease transmissions.

## Methods

Here we examined knowledge, attitudes and practices for COVID-19 among market vendors, of faith, in South-Western Uganda. A cross sectional study was undertaken among rural market vendors (n=248) in southwestern Uganda was undertaken using an online questionnaire.

## Results

Most moslems (72%) and protestants (70%) were aware that COVID-19 could present symptomatically and the challenges for control of COVID-19 in Uganda. Definitive knowledge of COVID-19 transmission dynamics was most prevalent among individuals of Protestant faith (70%). Most moslems (66%) interviewed found it difficult to comply with public health measures (lockdowns and self-isolation) while most pentecostals (64%) considered wearing as face mask to be impractical. Such discrepancies within a tight knit community and religious groupings in relation to practice shows a need to strengthen and revise policy for the national implementation of COVID-19 guidelines.

## Conclusion

Engagement from religious leaders to encourage their followers to abide to COVID-19 guidelines would facilitate Africa's COVID-19 response to become more effective addressing key areas of non-compliance that undermine control e.g. a majority of Pentecostal Christians are hesitant to be associated with alcohol-based hand sanitizers.

## 1. Introduction

In many developing countries, religious affiliations are deeply rooted in societal livelihoods [1]. In difficult times, communities often turn to God and 'gods' [2]. While novel coronavirus 2019 is spreading Globally, some African leaders have turned to God, ignoring science, as is the case in Tanzania [3]. Religious

leaders in Christianity and Islam were key actors, during the Ebola epidemic, to prevent community transmission within their faith communities; their activities widely affected during epidemic/pandemic control [4]. Religious institutions contributed much needed infrastructure in west Africa at a time when the medical institutions were under funded. Faith communities can play a synergistic role in supporting community efforts to control community transmissions of COVID-19 [4].

In Uganda, a majority of the population is Christian. Success of public health government programs depends on effective partnerships between religious institutions, policy makers and medical professionals [5]. Directives from the World Health Organization (WHO) against social gatherings to control COVID-19 transmission have negatively impacted religious-political partnerships [6]. Compliance of the rural communities to national lockdowns in rural communities is essential and requires support from community faith leaders. Faith leaders provide and underpin crucial psychosocial management [7,8] interrupted by closure of religious institutions. Faith significantly influences the attitudes and coping perceptions of Ugandan medical staff who continue to work under challenging field conditions with limited infrastructure support as in many developing countries [9]. The challenges created by COVID-19 in rural communities of developing countries have exacerbated an already compromised and underfunded infrastructure. Individuals handling patients with infectious diseases have become victims of significant stigma within their community [10], exposing yet another challenge associated with COVID-19 management in rural communities of Africa. Communities are reluctant to use alcohol-based hand wash to comply with the conditions of their faith [11]. In Burundi and Tanzania individual continue to perceive COVID-19 as a disease from God and many Ugandans consider COVID-19 a disease of “whites” [3]. Clear directives and information from religious leaders in developing countries remains scarce. The voices of faith leaders can allay fears within their communities during times of public distress [12]. This study aimed to assess knowledge and attitudes amongst market vendors of faith background on COVID-19 guidelines in Uganda.

## **2.0 Materials And Methods**

### **2.1 Study design**

A cross sectional study was undertaken in April 2020 involving fruit sellers and food store owners (dry and wet raw food sellers) of southwestern Uganda. The questionnaire was administered and responses collected electronically as previously described [13].

### **2.2 Statistical analysis**

Data in MS Excel was analyzed using WinPePI. Independent variables were religious denominations; all responses on knowledge were regarded as dependent variables. A confidence interval of 95% was considered and statistical significance regarded when  $P \leq 0.05$ .

## 3.0 Results

Of the respondents, the majority that were aware COVID-19 was zoonotic in origin were Protestants (69/99, 70%,  $P = 0.42$ ). A majority of respondents purporting to be muslim (21/29, 72%) and protestant (69/99, 70%) were aware that asymptomatic persons could transmit the virus ( $P = 0.26$ ). All muslim or Seven Day Adventist faith respondents (100%) were aware that COVID-19 could be spread through respiratory droplets. Seven Day Adventists (10/13, 76%) believed that children and youth were not implicated in transmission of COVID-19 ( $P = 0.19$ ). Adventists (11/13, 85%), Catholics (68/85, 80%), and Muslims (25/29, 86%) believed that the elderly were risky in the transmission of COVID-19 ( $P = 0.01$ ) as shown in Table 1.

The majority of muslim respondents (19/29, 66%) considered that it was difficult to avoid crowds ( $P=0.66$ ). Pentecostal Christians (11/17, 64%) considered it impractical to wear face masks ( $P=0.74$ ). All muslims and pentecostals (100%) expressed a willingness to regularly wash their hands with soap and water ( $P=0.23$ ). Most muslims (28/29, 97%), adventists (12/13, 92%); and protestants (90/99, 91%) agreed that they covered their mouth and nose when coughing and sneezing. Willingness to use disinfectants and sanitizers on working surfaces was prevalent in pentecostals (15/17, 88%) and protestants (87/99, 88%). Social distancing was more acceptable amongst muslims (19/29, 66%) than Adventists (5/13, 38%) as shown in Table 2.

Most respondents who identified as Adventists (9/13, 69%) and Catholics (51/85, 60%) believed that asymptomatic COVID-19 cases were the most prevalent. A majority of Catholics (51/85, 60%) agreed there was no treatment for COVID-19. Most protestants (92/99, 93%) considered that supportive treatment is important for management of COVID-19 patients (Table 3).

## 4. Discussion

Diversities in opinion among major religious groups in Uganda were notable. Knowledge as regards COVID-19 epidemiology was strongest in those of Christian faith but the basis for divergence in opinion between the faith groups were not investigated. Faith leaders are revered in Uganda and more broadly in Africa [5] highlighting the critical role faith leaders and groups in disseminating national guidelines in rural communities to control COVID-19.

The majority of community members from all religious backgrounds acknowledge that the elderly are at heightened risk of COVID-19. Information on COVID-19 is mainly acquired through radio in Ugandan rural communities [13]. However, increasing misinformation on COVID-19 in Uganda [3] shows that religious institutions would help bridge the knowledge gap, especially as most African countries prepare to come out of their respective COVID-19 national lockdowns. COVID-19 has been associated with increased religious activity, with many people in Africa seeking divine intervention [2,10].

In Uganda, the lack of readiness to self-isolate and reluctance to wear a mask in some faith groups is problematic. Faith plays a crucial role in psychosocial lifestyles [7,8,14], governmental strategies to

encourage communities to abide to the WHO guidelines to avoiding crowds and wear face masks would be strengthened through messaging partnerships developed with community leaders. Faith leaders routinely interact with locals and are in a strong position to evolve compliance to COVID-19 guidelines in their communities. Religious leaders in Kenya have come to appreciate COVID-19 guidelines and have encouraged their communities to abide and support government efforts to control COVID-19 in their neighborhoods [9].

Hand washing remains problematic, a willingness to wash hands with soap and water was not common across all faith groups; there is an opportunity for government to work in collaboration with stakeholders to encourage compliance to prevent community COVID-19 transmission [14,15]. Muslims and other faith groups cannot associate with alcohol [11], messaging to use alcohol-based sanitization is not likely to be effective in these communities and is regarded as offensive. Interventions in partnership with faith leaders should be explored for the long term management of COVID-19 and in general for infectious disease management [16] and people tend to give more attention to their religious leader's times of panic. That most respondents purporting to Christian faith are aware of asymptomatic carriers of COVID-19 only strengthens the need for vigilance and preventative measures at community level - the importance of continuous engagement to change community attitudes for positive change. In Tanzania, religious affiliations have been shown to improve HIV and AIDS control projects [17], demonstrating the relevance of this study.

## **Conclusion**

The faith sector is critical to establishing long term preventative measures for health security in the community for COVID-19. Government should engage with religious leaders for further community education to support public health policy in the community and promote policy adherence for COVID-19 guidelines.

## **Declarations**

### **Ethical approval**

Expatiated ethical approval from Kampala International Ethical Review Board was acquired and registered as Nr.UG-REC-023/201914. Written, informed consent was obtained from the study participants for the publication of any potentially identifiable images or data included in this article.

### **Consent for publication**

Not applicable.

### **Availability of data and materials**

Data set available in fig share: <https://figshare.com/s/96e3d8b0a24ca83c5617>

## Competing interests

The authors declare that they have no competing interests

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## Authors' contribution

IE, IMU, KIK, SCW conceptualized the study, IE, IMU, KIK designed the study, IMU, FS, ETA, RM, PDA, KM, AML, JAT, JOA, ESK, OS, AA, VBA, VN, SHE, and CO collected the data while IE, IMU, KIK, SCW conducted data interpretation. IE, IMU, KIK, SCW wrote the initial draft and all authors critically reviewed it for intellectual content, approved final version for publication and remain in agreement to be accountable for all aspects of the work.

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Not applicable.

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## Tables

**Table 1: Knowledge on Transmission of COVID-19 among respondents**

Transmission	Variable	Adv	Cath	Mus	Oth	Pent	Prot	df	$\chi^2$	<i>P</i> -value
		Frequency								
Zoonotic	No	5	39	12	2	6	30	5	4.9	0.42
	Yes	8	46	17	3	11	69			
No fever no spread	No	4	31	8	3	9	28	5	6.5	0.26
	Yes	9	54	21	2	8	71			
Spreads via droplets	No	0	6	0	3	3	3	5	34.1	0.00
	Yes	13	79	29	2	14	96			
Children-Youth not risky	No	3	38	16	3	6	34	5	7.4	0.19
	Yes	10	47	13	2	11	65			
Elderly risky	No	2	17	4	4	7	20	5	15.4	0.01
	Yes	11	68	25	1	10	79			

KEY: Adv = Adventist, Cath = catholic, Mus = muslim, Oth = others, BA = Born again, Pent = Pentecostal, Prot = protestant.

**Table 2: Health practices against COVID-19 amongst respondents**

WHO practices	Variables	Adv	Cath	Mus	Oth	Pent	Prot	df	$\chi^2$	<i>P</i> -value	
		Frequency									
Avoid crowds	No	5	48	19	2	10	55				
	Yes	8	37	10	3	7	44	5	3.3	0.66	
Wear mask	No	5	41	15	2	11	46				
	Yes	8	44	14	3	6	53	5	2.7	0.74	
Use Sanitiser	No	5	30	11	1	6	43				
	Yes	8	55	18	4	11	56	5	9.9	0.45	
wash hands regularly	No	1	3	0	1	0	3				
	Yes	12	82	29	4	17	96	5	6.9	0.23	
Cover mouth	No	1	7	1	1	4	9				
	Yes	12	78	28	4	13	89	5	7.4	0.69	
Clean surface	No	2	11	4	1	2	12				
	Yes	11	74	25	4	15	87	5	0.39	0.99	
Observe Social dist	No	1	8	0	1	3	8				
	Yes	12	77	29	4	14	91	5	5.5	0.35	

KEY: Adv = Adventist, Cath = catholic, Mus = muslim, Oth = others, BA = Born again, Pent = Pentecostal, Prot = protestant.

**Table 3. Perceptions towards COVID-19 amongst respondents**

Attitudes	Variables	Adv.	Cath	Mus	Oth	Pent	Prot	df	$\chi^2$	P-value
Some people have less signs	No	4	34	14	3	8	44	5	2.3	0.81
	Yes	9	51	15	2	9	55			
No known treatment	No	2	28	8	2	5	35	5	2.6	0.76
	Yes	11	57	21	3	12	64			
Supportive treatment helps	No	1	8	1	1	3	7	5	4	0.55
	Yes	12	77	28	4	14	92			
Severe cases rare	No	2	16	7	2	6	23	5	3.8	0.61
	Yes	11	69	22	3	11	76			
Quarantine after exposure	No	0	5	2	1	1	6	5	2.6	0.76
	Yes	13	80	27	4	16	93			
Confidence to overcome	No	0	9	2	0	2	3	5	13.9	0.17
	Yes	13	79	26	5	15	96			
Hand washing prevents	No	1	4	0	1	1	7	5	4.3	0.51
	Yes	12	81	29	4	16	92			
Lockdown good	No	2	35	12	2	6	23	5	9.7	0.08
	Yes	11	50	17	3	11	76			

KEY: Adv = Adventist, Cath = catholic, Mus = muslim, Oth = others, BA = Born again, Pent = Pentecostal, Prot = protestant.