

**Figure 1.** Ogun State, the Study Area

## Results

### Demographic Characteristics of the Respondents in the Study Area

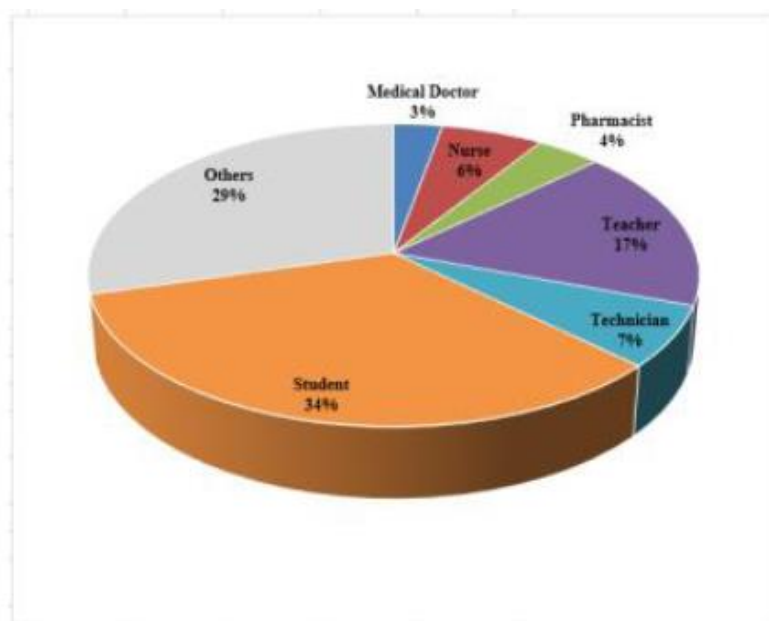
The demographic characteristics of the respondents in the study area are presented in Table 1 while the local government areas and the profession of the respondents were presented in Figure. 2 and 3. Most of the respondents were Nigerians with 97.3% responses while 53.8% and 46.2% were male and female, respectively. The percentages of the respondents between the ages of 15 -24 and 25 -34 consisted of the larger population in the study area with 30.9% and 27.4% responses. The least age group was 1.3% representing only 30 respondents between the ages of 75 and above in the study area. Majority of the respondents were representing 46.1% and 45.9% were married and single, respectively.

The least percentage of the respondents which represents only 2.5% did not have formal education, while the number of respondents with secondary and university education constituted larger percentages with 30.9% and 20.8% respectively. As Islam and Christianity are the most common religious in the study area, a very small number of the respondents which represents 0.3% belonged to none of the three major religions. A total of 1603 which represents 67.8% worshiped God since they were born. The results also showed that 92.8% of the respondents were Yoruba, 4.4% were Igbo, while Hausa constitutes 50 (2.1%) of ethnic groups. Figure, 2 indicated that teachers and other professions constituted larger percentages of the respondents in the study area. The percentages of respondents from different Local Government Areas in the study area were presented in Figure. 3.

**Table 1.** Demographic Characteristics of the Respondents

Demographic Characteristics		Frequency	Percent (%)
Nationality	Nigerian	2299	97.3
	Others	64	2.7
Sex	Male	1271	53.8
	Female	1092	46.2
Age Bracket	15-24	648	27.4

	25-34	729	30.9
	35-44	471	19.9
	45-54	287	12.1
	55-64	156	6.6
	65-74	42	1.8
	75 and above	30	1.3
<b>Marital Status</b>	Single	1084	45.9
	Married	1090	46.1
	Divorced	62	2.6
	Separated	47	2.0
	Widow	38	1.6
	Widower	42	1.8
<b>Level of Education</b>	No Formal Education	60	2.5
	Primary	108	4.6
	Secondary	731	30.9
	Col. of Education	262	11.1
	Polytechnic	317	13.4
	University	492	20.8
	Post Graduate	393	16.6
<b>Religion</b>	Islam	1388	58.7
	Christianity	899	38.0
	Traditional	69	2.9
	Others	7	.3
<b>Years of worshipping God</b>	< 5 years	24	1.0
	5 - 10 years	154	6.5
	11 - 20 years	154	6.5
	> 20 years	428	18.1
	since birth	1603	67.8
<b>Ethnicity</b>	Yoruba	2193	92.8
	Igbo	103	4.4
	Hausa	50	2.1
	Others	17	0.7



**Figure 2.** Profession of Respondents in the Study

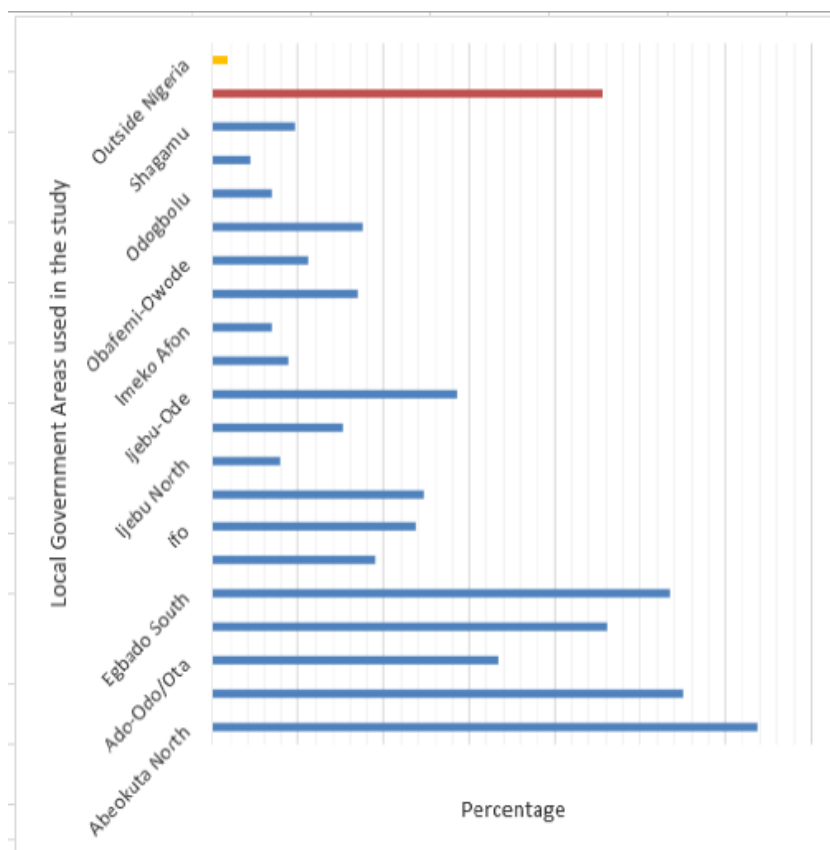


Figure 3. Local Government Area

### Mitigation Strategies against COVID-19

Table 3 presents the mitigation strategies against COVID-19 in the study area. The most frequently reported practice for prevention of COVID-19 among respondents was the avoidance of social gathering by (23.5%), the use of face masks by 224 (23.3%) and cleaning of hands with sanitizer by 22.7%. Others included: Praying and fasting (18.5%), and washing of hands with soap (9.4%). Only 2.6% did nothing to curb the spread of COVID-19 as shown in Figure.2.

### Best Strategies against COVID-19

Table 4 illustrates the results of the best mitigation strategies against COVID-19 in the study area. The results ranked the best strategies from 21.5% to 0.7%. Quarantining affected persons was ranked first, followed by practicing basic measures, and going to the hospital regularly with 21.5%, 20.6%, and 19.7% respectively. Using incantation, juju and magic; taking anointed water from pastors/imams/Alfas; drinking of and bathing with salt water; by taking traditional medicine/herbs were ranked low as the best strategies against COVID-19 in the study area.

Table 2. Mitigation Strategies against COVID-19

		Responses	
		N	Percent
<b>Mitigation Strategies against COVID-19<sup>a</sup></b>	Nothing	238	2.6%
	Washing of hands with soap	856	9.4%
	Cleaning of hands with sanitizer	2071	22.7%
	Using of face mask or shield	2121	23.3%
	Avoiding social gathering	2137	23.5%
	Praying and fasting	1683	18.5%
<b>Total</b>		9106	100.0%

<sup>a</sup> Dichotomy group tabulated at value 1.

**Table 3.** Best Strategies against COVID-19

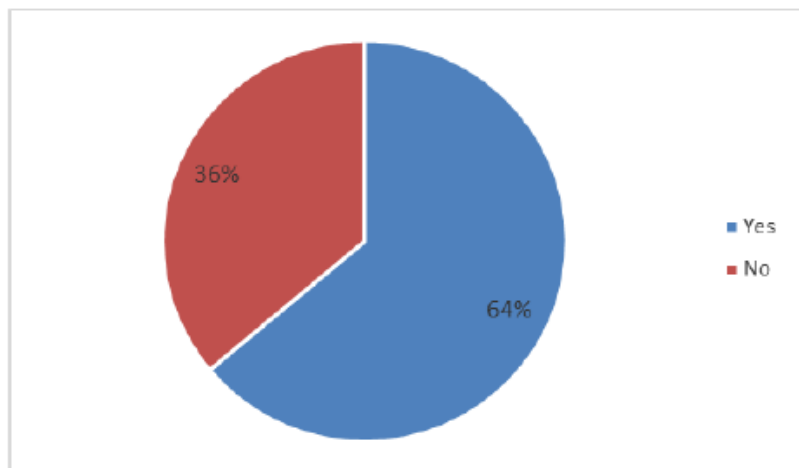
		Responses	
		N	Percent
<b>Best Strategies against COVID-19<sup>a</sup></b>	By taking traditional medicine/herbs	440	5.3%
	By taking anointed water from pastors/imams/Alfas	214	2.6%
	Drinking of and bathing with salt water	460	5.6%
	By using incantation, juju and magic	58	0.7%
	Frequent prayer and fasting	990	12.0%
	Taking of drugs like chloroquine	990	12.0%
	By going to the hospital regularly	1628	19.7%
	Affected persons should be quarantined	1773	21.5%
	By practising basic measures	1697	20.6%
<b>Total</b>	<b>8250</b>	<b>100.0%</b>	

<sup>a</sup>. Dichotomy group tabulated at value1.

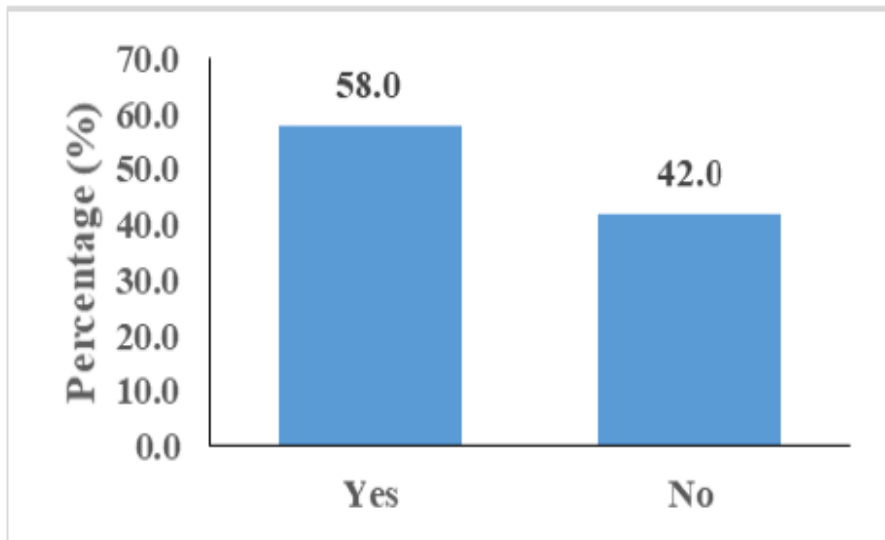
### Constraints to Mitigation Strategies against COVID-19

In Figure. 4, 64% of the respondents preferred going to Churches and/or Mosques to use the face masks while 993 (42%) did not have time to use face mask during COVID-19 (Figure. 5). The majority 1710 (72.4%) of respondents were not convenient with the use of face mask (Figure. 6). A small percentage

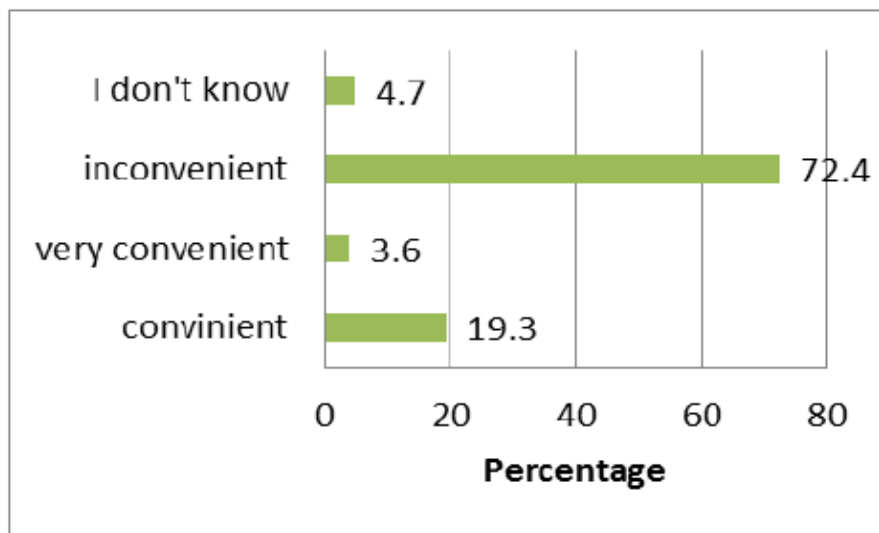
(16.9%) of the respondents felt good for not attending social gathering, while the majority 1165 (49.3%) of the respondents felt badly for not attending social gathering during COVID-19 (Table 4). The results in Figure. 7 shows that 79.3% of the respondents were not satisfied for not going for clubbing whenever they felt stressed out or bored during COVID-19.



**Figure 4.** Preference to go to Churches and Mosque Instead of Using Face Masks



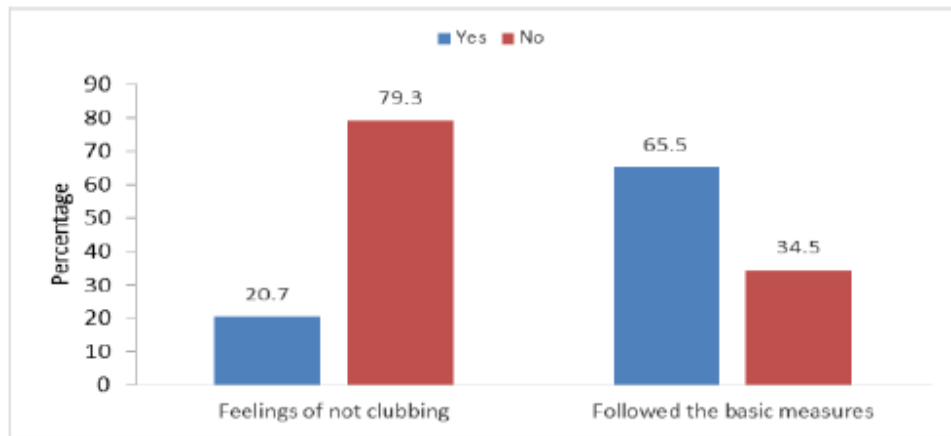
**Figure 5.** Having Time to use Face Mask



**Figure 6.** The use of Face Masks to Daily Activities

**Table 4.** Social Gathering

<b>Variables</b>	<b>Yes</b>	<b>No</b>
Good	399	16.9%
Bad	1165	49.3%
Sick	141	6%
Nothing	2363	27.8



**Figure 7.** Death as an End Result of COVID-19

## Discussion

From the present study, Nigerians were largely sampled with the ratio of male and female of 0.54 to 0.46. This is because the study was conducted in Nigeria and the population of male was little more than female in the study area. Being a Gateway State and one of the foremost educated states in Nigeria, the results of this study showed that majority of the people in the study are educated with a very small number of people without formal education. Findings obtained from this study revealed that the perception on the mitigation strategies of COVID-19 were most adopted and practiced. This indicates that the precautionary measures put in place to curb the spread of COVID-19 were practiced as the majority of the respondents were educated. Many of the respondents had the knowledge of COVID-19. This might be the rationale of adopting the basic measures as mitigation strategies of COVID-19 in the study area. Although distrust in government capacity regarding COVID-19 is currently obtained, individuals are willing to take proactive measures following the suspected development of COVID-19 symptoms [17]. An Indian study similarly reported that hospital visitation was frequently opted for as a step to be taken following the development of COVID-19 in individuals in a close relationship [18].

This study found that avoidance of social gathering, the use of face masks and cleaning of hands with sanitizer were more frequently embraced among respondents compared with other COVID-19 mitigation measures, although full adherence was low. A web-based study conducted in Nigeria mostly stated mouth-

covering while sneezing, wearing of face masks and avoidance of crowded spaces as self-reported practices among respondents [19]. In a similar study, the use of face masks and practice of social distancing measures were more adopted among respondents compared to other COVID-19 mitigation measures [20]. Findings of this study also revealed that multitudes of perceptions were associated with COVID-19, which include but not limited to an exaggerated illness with intentions for corruption, its highly infectious and deadly nature, and a reason for panic disorders.

Furthermore, the chance of positive mitigation strategies and/or practices regarding COVID-19 was associated with a positive perception of the risk involved [8]. In Nigeria, previous studies also substantiate the pivotal role of positive risk perception on imbibing COVID-19 mitigating strategies and/or protective measures and attitudes [19]. The results obtained in this study are like the knowledge concerning the practice of face masks in Saudi Arabia [1]. Due to deadly nature of COVID-19, it has presented anxiety and/or fear in every individual with similar symptoms of illness [8]. Studies have shown that fear could prompt healthy behaviour among individuals, most especially during epidemics, but such behaviour may not be viable [21, 22, 23].

This study found that quarantining affected person with COVID-19; practicing basic measures such as regularly handwashing, use of face masks and others; and going to the hospital were indicated by the respondents as the best strategies for preventing COVID-19 in the study area. Though, other protective measures



were also adopted by the respondents in the study area such as taking of chloroquine, prayers and fasting, use of salt water for drinking and bathing, and the use of medicinal herbs. Adoption of all these aforementioned strategies was because these individuals perceive themselves as vulnerable to COVID-19 infection. Use of face masks and regular handwashing practices have been identified as the mitigation strategies for breaking the chain of COVID-19 transmission in the study area. An online survey conducted in Nigeria revealed a higher practice of handwashing compared to other COVID-19 preventive measures [19].

A study conducted in Ilaro on preventive practice of Ebola virus disease outbreak revealed regular handwashing and use of sanitizers as the most useful protective measures against EVD [24]. Like this finding, a study conducted in Ibadan on hand hygiene practices post the Ebola virus disease outbreak revealed a high proportion of inadequate self-reported hand hygiene practice [25]. Other studies conducted in Edo State on Lassa fever reported inadequate handwashing practices, while a similar study in Kaduna State, Nigeria, reported good handwashing practices among respondents [26]. Acceptance of the practice of regular handwashing in the management of infectious diseases is the most similar findings in the studies.

There are constraints to mitigation strategies of COVID-19 in the study area. During COVID-19, respondents preferred going to Churches and Mosques to the use of face masks. They also indicated that no time to use the face masks, and they were not convenient to use it. This justifies an assertion that the use of face masks was the most determinant factor to the mitigation strategies for COVID-19. Other challenges included restriction of individuals to attend social gathering and for clubbing.

In general, this study found that COVID-19 poses significant threat to local economy, resulting in low income and resultant hunger.

This is likely due to the increased cost of purchasing goods or a result of the lockdown, which has denied many individuals the opportunity to earn their income. The provision of medical supplies and palliatives should receive highest recommendation among respondents. Further, health education, the enforcement of preventive measures, and free testing and treatment should receive much recognition. Similar suggestions have been made in previous studies [27].

## **Conclusion**

Mitigation strategies and challenges faced during COVID-19 pandemic in Ogun State, Nigeria has been assessed. The acceptance of precautionary actions is precarious to envision headlong spread of COVID-19. Ample and accurate risk insight for COVID-19 is a prerequisite to facilitate the espousal of COVID-19 safety procedures. This study hereby recommends heightened sensitization and health education sessions for all community adherents about COVID-19 in Ogun State, Nigeria, regardless of their sociodemographic characteristics. Further, there should be health campaigns more focusing on practices such as regular handwashing with soap and water and social distancing, which protects against transmission of COVID-19 among community members nonetheless of their sex. In addition, laws should be made on the mandatory use of face masks, and provision of accessible portable sources of water, soaps and sanitizers for regular handwashing and cleaning. Finally, free testing and treatment must receive much recognition, and the government should also install more infrastructures for water supply where dearth of water exists.

## **Acknowledgements**

The author expresses his gratitude to all community members for their willingness and cooperation to participate in this study.

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