Research

COVID 19: Determinants and Barriers to Infection Prevention and Control Practice among Residents in Bonny Island, Rivers State

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Abstract

Background: Coronavirus disease 2019 (COVID-19) which was declared a pandemic and described as a disease of public health emergency caused worldwide disruption of business activities, education, tourism and health challenges including death. Prevention is a viable strategy to contain the pandemic, including the use of vaccines. However, evidence abound which reveals that majority of people do not comply with proposed health and safety measures recommended by World Health Organization (WHO) and their respective country health authorities. This study identified socio-demographic and other variables which may influence compliance to practice of infection prevention and control (IPC) measures.

Method: This is a descriptive cross-sectional study conducted at zonal hospital Bonny. All eligible respondents who visited the hospital for Medicare were included into the study until sample size was achieved. Pretested interviewer administered questionnaire was used to elicit information from respondents. Multinomial regression analysis was used to analyze data with statistical significance set at 0.05. Ethical clearance, permission for the study and informed consent were derived from relevant authorities and respondents respectively.

Result: Compliance to good IPC measures was 73.9%. There was statistically significant compliance to good practice among public servants, respondents aged 31-40 years and females.

Conclusion: Good IPC measures was high among respondents, COVID 19 vaccine acceptance was poor, while factors such as inability to procure personal protective equipment and non-availability of water were responsible for poor compliance.

Key words: Practice, compliance, covid-19, education, knowledge, prevention, vaccine.

Introduction

In December 2019, the world witnessed the outbreak of viral pneumonia of unknown aetiology which occurred in the city of Wuhan in eastern China[1]. The causative agent identified as coronavirus disease 2019 (COVID-19) by World Health Organization (WHO) is a coronavirus subtype called severe acute respiratory syndrome coronavirus 2 (SARS-COV-2)[2]. The virus which causes an acute respiratory disease affects the lungs mainly[3] and is the sixth public health emergency of international concern[4]. Some strains of coronavirus are zoonotic, but many strains are not zoonotic[5]. Six strains of coronavirus cause disease in humans namely: 229E, OC43, NL63, HKUI, severe acute respiratory syndrome coronavirus (SARS-COV) and middle east respiratory syndrome (MERS) coronavirus. The last two are zoonotic and can be fatal[6]. In late January 2020, WHO described the disease as a public health emergency and in March 2020 it was declared a pandemic[7]. By end of April 2020, the disease has spread worldwide[8]. The disease which is transmitted mainly via respiratory droplets of an infected person when they sneeze or cough[9] is characterised by fever, shortness of breath, cough, loss of smell, and taste sensation. Severe cases may lead to pneumonia, multiple organ failure and death[10]. People with certain health conditions e.g., chronic obstructive pulmonary disease, asthma, heart condition, immune system condition such as HIV, cancer, diabetes mellitus etc have greater risk of adverse complications[11]. Clinical presentation of the disease occurs in two forms. Mild (80.9%) and severe/critical form (19.1%)[12]. Covid-19 has a much lower-case fatality rate which is about 2.67% less than 5%, compared to SARS and MERS[13]. The pandemic had global impact on business, education, health and tourism[14].

Despite the relative low fatality rate, in Africa the situation is critical because of weak health care system with few health care workers and over dependence on imported medicines and pharmaceutical products[15]. In sub-Saharan Africa, high infection rate can present a difficult situation due to co-morbidities, poverty, poor health care services and limited access to health facilities[9].

The first case of Covid-19 in Nigeria was reported on February 27, 2020, in an Italian who returned from Milan[16], while first recorded death was on March 23, 2020 in a 67-year-old male with underlying medical condition[17]. The Federal Government of Nigeria working in close collaboration with various state government initiated and activated several mechanisms to control the disease. The Federal Ministry of Health through the Nigerian Center for Disease Control (NCDC) activated National Emergency Operation Center (EOC) which leads the national public health response to Covid-19 outbreak in Nigeria. It worked along with various state EOC deploying national rapid response teams to support response activities[18]. NCDC is the national public health institution which deals with preparedness, detection and responses to infectious disease outbreak and public health emergencies[19]. In addition, the president established a presidential task force on covid-19 on March 9, 2020, whose aim is to control and co-ordinate a multisectoral, inter-governmental efforts to contain the spread and mitigate the impact of covid-19 pandemic in Nigeria[20]. The disease had socio-economic and political impacts on the country. Most schools across the country were closed, civil service activities were disrupted as civil servants and other public servants were advised to work from home. Also, economic and commercial activities were completely paralyzed. The health care sector was overwhelmed due to poor infrastructure and paucity of manpower. However, through the instrumentality of some organs of State, the country implemented some control measure including ban on international flight, lock down of some non-essential services such as schools, markets etc[21]. It is imperative to note that prevention is the most viable strategy to contain the pandemic[22]. Therefore, global intervention to contain the disease include the use of vaccines but is still not clear if it can prevent the transmission of the virus[23]. Regrettably, studies have shown that majority of people in sub-Saharan Africa are non-complaint with proposed health and safety measures recommended by WHO and their respective country health authorities[9]. The objective of this study is to identity socio-demographic and other variables which may influence compliance to covid-19 infection prevention and control measures among residents in Bonny Island in Rivers State.

Justification for this study lies on the need to contain the pandemic in Bonny Island by identifying factors which may mitigate compliance to preventive measures and their application to develop an effective and robust control strategy.

Method

The study was a cross-sectional descriptive study conducted at General Hospital Bonny, in Bonny Island, Rivers State Nigeria. The study was conducted during the active phase of Covid-19 pandemic in the State, from 15th March to 18th May 2021. The study populations were visitors who came to the facility via the General Out-Patient Department (GOPD) for various medical reasons. Minors (less than 18 years), elderly and incapacitated persons, visitors who did not give consent and health care workers (working either within or outside the study facility, this is to ensure unbiased information from the public.) were excluded from the study. Using the formula for a cross-sectional study[24], a sample size of three hundred and sixty-six (366) was derived after adjusting for attrition. All eligible visitors were recruited into the study until required sample size was achieved. Respondents that have been interviewed previously were not interviewed again following their presentation at the facility for re-visit.

Study instrument was structured interviewer administered pretested questionnaire adapted and prepared in English language, which was used to extract information on compliance to preventive practice towards covid-19 and socio-demographic profile. To evaluate respondent's compliance towards safety practices, questions from the questionnaire had weight attached to them to create a composite score of practice. Score were interpreted using an adapted grading score of 0 and 1. Practice that could not protect against covid-19 infection were graded 0 and described as poor, while practices that could protect against covid-19 were grade 1 and described as good. Data collected was cleaned, coded and entered into excel spread sheet which was then exported into statistical package for social sciences (SPSS) version 23.0 for analysis. Multinomial logistic regression analysis was used to determine the relationship between practice and other variables. Statistical significance was set at 0.05. Data was presented in simple frequency distribution table. Ethical approval was obtained from the ethics review committee of Rivers State Hospitals Management Board. Permission to conduct the study was granted by Rivers State Hospitals Management Board while written

informed consent was extracted from the study participants.

Results

Socio-Demographic Characteristics: Respondents aged 31-40 years were the most Predominant, while majority of respondents were public Servants

Table 1: Socio-Demographic Characteristics

Variables N=366	Frequency (%)
Age	
0-20	47(12.8)
21-30	88(24.1)
31-40	119(32.5)
41-50	57(15.6)
≥50	55(15.0)
Sex	
Male	133(36.3)
Female	233(63.7)
Marital Status	
Married	229(62.6)
Single	127(34.7)
Separated/Divorced	4(1.1)
Widowed	6(1.6)
Occupation	
Unemployed	96(26.2)
Public Servant	149(40.7)
Private Sector/Artisan	17(4.6)
Businessman/Woman	104(28.5)
Religion	
Christian	364(99.5)
Muslim	2(0.5)
Tribe	
Igbo	59(16.1)
Yoruba	8(2.2)
Hausa	10(2.7)
Rivers Ethnic Minority	235(64.2)
Non-Rivers Ethnic Minority	54(14.8)
Educational Qualification	
Nil	2(0.5)
Primary	25(6.8)
Secondary	129(35.2)
Tertiary	210(57.5)

Overall Practice and Knowledge Score

Total composite score for good practice was 73.9% while composite score for good knowledge was 35.4%.

Table 2: Over all Practice and Knowledge Score

A. Practice

Variables	Good	Poor	Total	X^2	P
nd Washing	280	86	366	35.143	0.000
Method of Hand Washing	334	32	366	33.839	0.000
Disinfection Regularity	214	152	366	42.020	0.000
Hand Sanitizer Use	223	143	366	37.827	0.000
Avoid Over-Crowding	332	34	366	11.665	0.020
Cough Etiquette	348	18	366	42.222	0.000
Face Mask Use	232	134	366	49.445	0.000
Observing Social Distance	325	41	366	6.269	0.180
Covid 19 Vaccine Uptake	114	252	366	15.724	0.003

Lifestyle Modification	302	64	366	12.984	0.011
Composite Score (%)	**2704(73.9)**	**956(26.1)**	**3660(100)**		

B. Knowledge

	Good	**Fair**	**Poor**
Meaning of Covid 19	39	18	309
Covid 19: Myth or Real	322	6	38
Understanding of Covid 19	36	96	234
Signs/Symptoms of Covid 19	72	270	24
Route of Transmission	328	0	38
Treatment of Covid 19	136	20	210
Persons Most at Risk	26	308	32
Prevention of Covid 19	78	280	8
Composite Score (%)	**1037(35.4)**	**998(34.1)**	**893(30.5)**

Socio Demographic Profile and Practice

Public servants showed greater compliance to good practice while artisans had the least practice score. Also, good practice score was more in married respondents.

Table 3: Socio Demographic Profile and Practice

A. Occupation and Practice

Variables	**Unemployed**		**Public Servant**		**Artisan**		**Business**		**X**	**P**
	Good	Poor	Good	Poor	Good	Poor	Good	Poor		
Hand Washing	71	25	126	23	11	6	72	32	16.686	0.054
Method of Hand Washing	77	19	142	7	17	0	98	6	20.322	0.002
Disinfection Regularity	54	42	92	57	9	8	59	45	10.971	0.531
Hand Sanitizer Use	67	29	91	58	5	12	60	44	25.491	0.002
Avoid Over-Crowding	85	11	140	9	15	2	92	12	3.307	0.347
Cough Etiquette	92	4	143	6	17	0	96	8	9.856	0.131
Face Mask Use	72	24	90	59	8	9	62	42	18.036	0.035
Observing Social Distance	87	9	136	13	13	4	89	15	4.382	0.223
Covid 19 Vaccine uptake	32	64	59	90	1	16	22	82	16.839	0.001
Lifestyle Modification	82	14	119	30	11	6	90	14	5.612	0.132
Composite Score (%)	**719 19.6**	**241 6.7**	**1138 31.1**	**352 9.6**	**107 2.9**	**63 1.7**	**740 20.2**	**300 8.2**		

B. Marital Status and Practice

Variables	Married		Single		Widow		Divorced		X	P
	Good	Poor	Good	Poor	Good	Poor	Good	Poor		
Hand washing	180	49	92	35	4	0	4	2	13.75	0.13
Method of Hand Washing	209	20	117	10	2	2	6	0	7.07	0.314
Disinfection Regularity	142	87	66	61	2	2	4	2	17.30	0.139
Hand Sanitizer Use	134	95	83	44	4	0	2	4	17.60	0.040
Avoid Over-Crowding	204	25	118	9	4	0	6	0	3.42	0.331
Cough Etiquette	216	13	122	5	4	0	6	0	3.69	0.718
Face Mask Use	149	80	81	46	0	4	2	4	24.45	0.004
Observing Social Distance	204	25	111	16	4	0	6	0	2.63	0.451
Covid 19 Vaccine Uptake	72	157	38	89	2	2	2	4	0.72	0.867
Lifestyle Modification 195	34	99	28	2	2	6	0	7.37	0.061	
Composite Score	**1705**	**585**	**927**	**343**	**28**	**12**	**44**	**16**		
(%)	**46.6**	**16.1**	**25.3**	**9.4**	**0.7**	**0.3**	**1.2**	**0.4**		

C. Educational Status and Practice

Variables	Nil		Primary		Secondary		Tertiary		X	P
	Good	Poor	Good	Poor	Good	Poor	Good	Poor		
Hand Washing	2	0	15	10	100	29	163	47	9.578	0.386
Method of Hand Washing	2	0	21	4	119	10	192	18	9.578	0.386
Disinfection Regularity	2	0	15	10	84	45	113	97	26.775	0.008
Hand Sanitizer Use	2	0	13	12	82	47	126	84	11.415	0.248
Avoid over-Crowding	2	0	21	4	116	13	193	17	1.974	0.578
Cough Etiquette	2	0	25	0	116	13	205	5	16.944	0.009
Face Mask Use	2	0	15	10	94	35	121	89	18.867	0.026
Observing Social Distance	2	0	21	4	118	11	184	26	2.281	0.516
Covid 19 Vaccine Uptake	0	2	4	21	36	93	74	136	6.762	0.080
Lifestyle 2	0	24	1	101	28	175	35	6.686	0.083	

Modification								
Composite Score	**18**	**2**	**174**	**76**	**966**	**324**	**1546**	**554**
(%)	**0.5**	**0.05**	**4.7**	**2.0**	**36.4**	**8.8**	**42.2**	**53.5**

D. Age And Practice

Variables	**0-20**		**21-30**		**31-40**		**41-50**		**>50**		**X**	**P**
	Good	Poor	Good	Poor	Good	Poor	Good	Poor	Good	Poor		
Hand Washing	22	25	70	18	94	25	47	10	47	8	34.8	0.001
Method of Hand Washing	45	2	76	12	113	6	47	10	53	2	19.4	0.013
Disinfection Regularity	24	23	52	36	67	52	34	23	37	18	35.27	0.004
Hand Sanitizer Use	28	19	63	25	63	56	39	18	30	25	30.46	0.002
Avoid over-Crowding	43	4	76	12	111	8	53	4	49	6	3.345	0.502
Cough Etiquette	45	2	84	4	117	2	49	8	53	2	28.1	0.001
Face Mask Use	39	8	58	30	65	54	36	21	3	21	36.87	0.000
Observing Social Distance	37	10	79	9	107	12	49	8	53	2	8.756	0.068
Covid 19 Vaccine Uptake	8	39	30	58	35	84	26	31	15	40	11.015	0.02
Lifestyle Modification	43	4	64	24	100	19	44	13	51	4	14.415	0.006
Composite Score	**334**	**136**	**652**	**228**	**872**	**318**	**424**	**146**	**422**	**128**		
(%)	**9.1**	**3.7**	**17.8**	**6.2**	**23.8**	**8.7**	**11.6**	**3.9**	**11.5**	**3.7**		

E. Sex And Practice

Variables	**Male**		**Female**		**X**	**P**
	Good	Poor	Good	Poor		
Hand Washing	101	32	179	54	1.99	0.575
Method of Hand Washing	117	16	217	16	2.764	0.251
Disinfection Regularity	74	59	140	93	8.096	0.088
Hand Sanitizer Use	73	60	150	83	17.05	0.001
Avoid Over-Crowding	111	22	221	12	12.46	0.000
Cough Etiquette	119	14	229	4	25.02	0.000
Face Mask Use	82	51	150	83	5.817	0.121
Observing Social Distance	117	16	208	25	0.143	0.706

Covid 19 Vaccine Uptake		41	92		73	160	0.010	0.920
Lifestyle Modification	106	27		196	37		1.129	0.288
Composite Score (%)		**941 25.7**	**389 10.6**		**1763 48.2**	**567 15.5**		

4. Educational Qualification and Socio-Demographic Characteristics

Females and respondents aged 31-40 were the most educated while Widows and Artisans had the least formal education

Table 4: Educational Qualification and Socio-Demographic Characteristics

	Nil	Primary	Secondary	Tertiary	Total
	Educational Qualification and Sex				
Male	0(0)	6(24.0)	54(41.9)	73(34.8)	133(36.3)
Female	2(100)	19(76.0)	75(58.1)	137(65.2)	233(63.7)
Total	**2(0.5)**	**25(6.8)**	**129(35.2)**	**210(57.5)**	**366(100)**
	Educational Qualification and Age				
0-20	0	4(8.5)	25(53.2)	18(38.3)	47(12.8)
21-30	0	4(4.5)	33(37.5)	51(58.0)	88(24.0)
31-40	2(1.7)	3((2.5)	34(28.6)	80(67.2)	119(32.5)
41-50	0	4(7.0)	23(40.3)	30(52.7)	57(15.6)
≥50	0	10(18.2)	14(25.5)	31(56.3)	55(15.1)
Total	**2(0.5)**	**25(6.8)**	**129(35.2)**	**210(57.5)**	**366(100)**
	Educational Qualification and Marital Status				
Married	2(0.9)	13(5.7)	73(31.9)	141(61.5)	229(62.6)
Single	0	8(6.3)	56(44.1)	63(49.6)	127(35.2)
Separated	0	0	0	4(100)	4(1.0)
Widowed	0	4(66.7)	0	2(33.3)	6(1.2)
Total	**2(0.5)**	**25(6.8)**	**129(35.2)**	**210(57.5)**	**366(100)**
	Educational Qualification and Occupation				
Unemployed	0	4(4.2)	33(34.4)	59(61.4)	96(26.2)
Public Servant	0	8(5.4)	42(28.2)	99(66.4)	149(40.7)
Artisan/Private	0	2(11.8)	7(41.2)	8(47.0)	17(4.6)
Business	2(1.9)	11(10.6)	47(45.2)	44(42.3)	104(28.5)
Total	**2(0.5)**	**25(6.8)**	**129(35.2)**	**210(57.5)**	**366(100)**

5. Reasons for non-compliance to preventive practices

Forgetfulness and non-availability of Consumables and Equipment were amongst the commonest reasons given by respondents for non-compliance.

Table 5: Reasons for non-compliance to preventive practices

Variable	Reasons	Freq (%)
Reasons for non-regular Handwash	Forgetful	31(38.7
	non- availability of water	30(37.5)
	no reason	10(12.5)
	don't like frequent hand wash	2(2.5)
	don't believe in existence of covid	7(8.8)
Why use only water	feel safer	2(6.2)

	prefer use of sanitizer	2(6.2)
	non-availability of soap	22(68.9)
	no reason	4(6.2)
	covid not real	2(6.2)
Reasons for non-regular	Forgetful	37(24.3)
Use of disinfectant	exhausting	27(17.7)
	work description does not permit	30(19.7)
	no reason	21(13.8)
	non-availability	37(24.5)
Reasons for irregular/	forgetful	22(16.4)
Non-use of face mask	difficulty breathing	53(39.5)
	inconveniencing	31(23.1)
	covid not real	8(5.9)
	no reason	17(12.6)
Reasons for non-uptake	reports of reaction	67(26.6)
of covid vaccine	non-availability	54(21.4)
	busy work schedule	6(2.4)
	medical condition	6(2.4)
	don't believe in existence of covid	86(34.1)
Any reaction to covid vaccine	yes	32(28.1)
	no	82(71.9)
Reasons for not modifying	avoid discriminating against others	18(28.1)
Lifestyle	work schedule /description	20(31.2)
	do not believe it would protect	14(22.0)
	do not believe in existence of covid	12(18.7)

Discussion

This study recorded an impressive 73.9% compliance to good infection prevention and control practice by respondents. Also, there was significant compliance to good practice for public servants, people aged 31-40 years and female respondents. Only 31.1% of respondents had taken the Covid-19 vaccine, while factors such as inability to procure personal protective equipment (PPE) and non-availability of water were some reasons given by respondents for poor practice. The overall compliance to good practice was statistically significant. The result from this study was similar to the finding seen in a Nigerian study and also in a study conducted in Iraq with compliance to good practice recorded at 75.6%[21] and 75.8%[8] respectively. Contrastingly, some studies in Iran and Enugu in Nigeria recorded abysmal compliance to good practice at 16.7% and 41.6% respectively[25, 26]. The result seen in this study was expected and in tandem with logical reasoning, given that an overwhelming percentage (92.7%) of respondents had tertiary and secondary education. The author reasons that, this level of education should enhance willingness to engage in appropriate compliance to good infection control and prevention measures. Also, literatures have shown significant association between education and compliance to good practice[25] education and knowledge[27] knowledge and practice[28]. Therefore, the intertwined relationship between education and practice was largely responsible for high compliance rate.

Respondents within the age grade 31-40 years had better compliance to good practice while persons less than 21 years had the least compliance to good practice. There has not been any unanimous concurrence among scholars regarding the age grade most compliant to covid-19 preventive measures. While some studies reveal significantly high odds in favor of age grade 30-40 years[29] which is in conformity with the finding in this study, other studies identified other age grade as most compliant to safety practice; 50-59[28], 41-50[25]. Interestingly, in congruence with findings from this study, some literatures reveal age grade less than 21 as least compliant to good infection prevention measures[25,29,30]. Furthermore, age grade 30-40 years had

more formal education than other groups. Previous section of this article reveals significant correlation between education, knowledge and compliance to good practice[25]. Also, most people within this age grade are the working class with dependents. Expectedly, to ensure uninterrupted and adequate provision of food and shelter for themselves and dependents, compliance to precautionary preventive practice is essential.

Preventive practices were significantly and remarkably higher among female respondents than their male counters parts. The results obtained from this study corroborates results from other studies[25,10]. Furthermore, few studies also submit higher practice score among females but were not significant[21,28]. In divergence, some scholars revealed higher significant preventive practice score among males[8,29]. Males are more adventurist and exploitative. They also engaged in high-risk maneuver than females. These attributes play key roles in low preventive score seen in males. Additionally, and most impressive is the high formal educational status attained by females than males in this research. The relationship between education and practice has already been established[27].

Public servants exhibited significant higher score in preventive practice than other occupational groups. Artisans and respondents working in private establishment had the least compliance. A study conducted in South-South Nigeria established a significantly higher mean score for preventive practice among government employee than respondents in other forms of occupation[30]. In contrast to findings from this study, some reports revealed respondents in private establishment exhibited higher compliance to preventives practices[31]. Public servants have privileged information on issues of public concern. They have access to sources of information including passage of interpersonal information following interaction with colleagues at place of work. Also, most public institutions have established protocol which ensures precautionary preventive practice compared to private institution and artisans whose main objective is to get job delivered within shortest possible time at minimal cost. Note that, compliance to preventive practice require additional cost and time. Furthermore, in conformity with established reports, public servants with higher formal educational qualification expectedly presents with better preventive practice score[25].

There was no significant association between marital status and preventive practice. However married respondents showed high compliance to preventives practice. Some studies also reported an insignificant higher preventive practice score among married persons[32,33]. In furtherance, some research work revealed significantly higher practice score among married respondents[10,28]. It is also worthy to note contrasting report from some scholarly article which reveals significant higher mean practice score for respondents who are single[30] and for divorced respondents[31]. The responsibility bestowed on married person for the protection of life and property of their household enhances the innate desire to conform to preventive practice. They ordinarily would not engage in practices which will jeopardize the health and safety of their household.

Less than average number (31.1%) of respondents took the covid-19 vaccine as at time of conducting this study which was approximately a year from the appearance of first case of covid-19 in Nigeria. This result obtained was proportional to the knowledge score on covid-19 (35.4%) seen in this work. Regrettably the uptake of covid-19 vaccine in this study falls short of expectation considering the facility-based nature of this study. The facility is a covid-19 vaccine administration center. Furthermore, routine health education, sensitization and awareness campaign are carried out daily at the general out-patient department before commencement of clinic. As at the time this study was conducted, rate of covid-19 vaccination in other facilities were unclear. However, the author identified myth surrounding adversity following uptake of the vaccine as predominant factor which discouraged uptake of the vaccine. Therefore, rigorous campaign to dispel such myth should be initiated to increase up-take. Various factors which were identified as barriers to compliance with good covid-19 infection prevention and control measures includes inability to procure personal protective (PPE) equipment such as face mask, hand sanitizers and hand gloves. Other factors are, inconveniences experienced with use of PPE, pressure of work and forgetfulness. Also, some respondents did not practice preventive measure due to their belief in non-existence of covid-19. In addition, some respondents declined vaccine uptake due to fear of reaction to the vaccine, health issues and other beliefs which were unfounded. Some of these reasons were corroborated by a facility-based study in Northern Nigeria[28] for avoidance of doubt, these are modifiable factors which can be eliminated via the instrumentality of well designed and implemented behavioral change communication. Therefore, relevant authorities should take necessary action to improve the situation.

The facility-based nature of this study limits its generalizability. A proportion of residents in the island do not visit health facilities for their health challenges but conform to unorthodox practitioners to address their health care needs. A community-based study

should be conducted to fill this gap. Furthermore, a robust public health awareness campaign involving use of conventional mass media and traditional public address system should be deployed in Bonny, to enhance and encourage awareness on COVID 19 and vaccine acceptance.

Conclusion

Females, respondents aged 31-40 years and public servants had significant compliance to covid-19 preventive practice. Uptake of covid-19 vaccine was poor, while several reasons such as forgetfulness, non-belief in existence of covid-19, inability to procure PPE and non-availability of water prevented respondents from conforming to preventive practices among residents of Bonny Island in Rivers State.

Authors' contribution

Bright Ogbondah (conceptualization, writing, editing, data collection and analysis), Golden Owhonda (conceptualization, editing), Anwuri Luke (Data analysis, writing, editing), Ishmael Jaja (Data collection, collation, and cleaning, editing), Pauline Green (writing, editing, co ordinating research team), Ositadinma Pius (writing, editing)

Conflict of Interest

No conflict of interest

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