Original Article

Knowledge of Covid-19 and Psychosocial Experiences During the Covid-19 Lockdown among Secondary School Students in Eleyele, Ibadan, Oyo State, Nigeria

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Abstract

Background: COVID-19 Is A Highly Contagious Disease That Can Easily Spread From Person To Person And Is A Global Health Threat. The Ongoing COVID-19 Is Inducing Fear And Knowledge Of The Disease Will Help To Dissipate Fear. The Lockdown That Was Introduced At The Earlier Onset In Many Countries Including Nigeria Was Sudden And This Had Implication For Physical And Psychological State Of Individuals Especially Young People, Who Are Easily Bored. Assessment Of Young People's Knowledge And Psychosocial Experience During The Lockdown Was The Objective Of This Study. This Was Done To Provide Baseline Information About Their Experience During This Unprecedented Event.

Methods: A Descriptive Cross-Sectional Survey Was Conducted Among 352 Respondents From Five Schools During The First Reopening Of Schools For Those In JSS3 And SSS3 Who Were Due For External Examinations. Simple Random Sampling Was Used For Selection Of Schools, While Systematic Sampling Was Used To Select Respondents. Data Were Generated From 28th September To 2nd Of October, 2020. Data Were Analyzed Using Descriptive And Inferential Statistics Of Chi-Square Test At 0.05% Level Of Significance

Results: More Than Half (57.1%) Were Females, 55.7% Were Between 15-19 Years With Mean Age Of 14.7± 1.910, 54.3.0% Were In Third Year Of Senior Secondary, 56.8% Were From Oyo State, 84.7% Are From Yoruba Ethnic Group And More Than Half Live With Both Parents. More Than Half (58.8%) Had Good Knowledge Of COVID-19, 56.0% Had Positive Psychological Experiences And 57.7% Had Positive Social Experience. Psychological (P=0.101) And Social Experiences (P=0.192) Were Not Significantly Associated With Level Of Knowledge Of COVID-19.

Conclusion: More Than Half Of The Students Had Good Knowledge Of COVID-19, Positive Psychological And Positive Social Experiences. Regular Health Education About COVID-19 And Its Prevention Is Needed To Sustain The Positive Behavior Among The Students And Curb The Spread Of COVID-19.

Keywords: COVID-19, Knowledge, Psychological Experience, Social Experience, Students

Introduction

COVID-19 is a global health threat and is by far the largest outbreak of atypical pneumonia since the severe acute respiratory syndrome (SARS) outbreak in 2003[Wang, 2020]. The World Health Organization (WHO) declared it a Public Health Emergency of international Concern on 30th January 2020 [WHO, 2020a]. On the 11th of March, WHO declared COVID-19 a pandemic as by then about 114 countries have been affected [WHO, 2020]. Coronaviruses are generally pathogenic to mammals and birds and cause mild upper respiratory tract infections in humans [Burrell, Howard and Murphy, 2017]. Human-to-

human transmission has been observed via virus-laden respiratory droplets, as a growing number of patients reportedly did not have animal market exposure, and cases have also occurred in healthcare workers (Huang, 2020).

The average incubation period is estimated to be 5.2 days, with significant variation among patients (Li, 2020), and it may be capable of asymptomatic spread (Rothe, 2020). Symptoms of infection include fever, chills, cough, coryza, sore throat, breathing difficulty, myalgia, nausea, vomiting, and diarrhea (Chen, 2020). Severe cases can lead to cardiac injury, respiratory failure, acute respiratory distress syndrome, and death (Chen, 2020). The provisional case fatality rate by WHO is around 2%, but some researchers estimate the rate to range from 0.3% to 0.6% (Nishiura, 2020).

COVID-19 infection is a highly contagious disease and has affected a large population; the total number of deaths caused due to this virus has exceeded that caused by any of its predecessors. As at June 26 2020, 15:44 GMT, the coronavirus (COVID-19) has affected about 213 countries and territories around the world and 2 international conveyances with a total number of infected cases of about 9,714,809, 491,856 deaths and 5,250,087 recovered cases (Nigerian Center for Disease Control, NCDC, 2020). Nigeria confirmed its first case of coronavirus on the 27th February, 2020 in Lagos State through an Italian citizen who works in Nigeria had returned on 25 February from Milan, Italy (NCDC, 2020). And the second case was confirmed on 9 March, a Nigerian citizen who had contact with the Italian Citizen (Ayodamola, 2020). The first death in Nigeria was recorded on March 23, 2020, a 67-year-old Suleiman Achimugu, an engineer who returned from United Kingdom with underlying health conditions (Emorinken, 2020). Since then, the number of cases has continued to escalate exponentially within the country and spreading to 35 states, including Federal Capital Territory, Abuja; by June 26, 2020, Nigeria recorded 22,614 cases infected with COVID-19 with 7,822 discharged cases and 549 deaths (NCDC, 2020). In a bid to curb the spread of Coronavirus in Nigeria, the federal government announced lockdown in the country, with total lockdown in three major cities: Lagos, Abuja and Ogun State which lasted for at least two weeks, (Mbah, 2020). Many people stayed at home and socially isolated themselves to prevent being

infected. Students are not left out; they have been withdrawn from academic activities for more than a month without hope of when it will end (Horton, 2020). School closures have put additional strain and demand on students, especially among women and girls. It has created more negative impacts on the adolescents; they spent significant hours on chores at home, especially the girls.

The ongoing COVID-19 epidemic is inducing fear, and a timely understanding of level of knowledge about the disease and psychosocial experiences is urgently needed for the society, especially among the students. Following wide spread of infection and total lockdown imposed on people, there could be profound and wide range of psychosocial impacts on people. People are likely to experience fear of falling sick or dying, feelings of helplessness, and stigma (Xiang, 2020).

The knowledge and psychosocial experiences of the public, especially amongst the students are expected to largely influence the degree of adherence to the personal protective measures and ultimately the clinical outcome. Hence, it is important to study the knowledge of COVID-19 and psychosocial experiences in the Nigerian population. The main objective of this study was to assess the knowledge of COVID-19 and psychosocial experiences during the COVID-19 Lockdown among Secondary School Students in Eleyele, Ibadan Northwest L. G. A., Oyo State.

Research Questions and Hypotheses

1. What is the level of knowledge of COVID-19 among the students?
2. What are the protective and preventive practices of COVID-19 observed among the students?
3. What are the psychological experiences encountered by students during the COVID-19 Lockdown?
4. What are the social experiences encountered by students during the COVID-19 Lockdown?

Ho1: There is no significant association between the knowledge of COVID19 and psychological experiences during COVID-19 lockdown

Ho2: There is no significant association between the knowledge of COVID-19 and social experiences during COVID-19 lockdown

Methodology

Materials and methods: Research Design: The research was a descriptive cross-sectional survey.

Setting: Five public schools in Eleyele Ibadan Northwest Local Government Area, Oyo state were recruited for the study. Eleyele is an urban settlement in Ibadan Northwest L.G.A. According to Official website of Oyo State government, there are ten (10) public Secondary schools in Eleyele. Five were randomly selected for the study, the selected schools are:

Oba Abass Alesinloye Grammar School, Eleyele,

Eleyele Secondary School, Eleyele,

Anwar-Ul-Islam Grammar school, Eleyele-Dugbe road

Army Barracks Grammar School, Letmuck Barracks,

Ansar-Ud-Deen High School, Sango-Eleyele road.

All the schools were mixed school consisting of boys and girls.

Study population: Secondary school students in the five selected schools Eleyele, Ibadan Northwest L.G.A., Oyo State. The five schools have a total population of four thousand, five hundred and seventeen students (4517).

Sample size: The required sample size of 352 inclusive of 10% attrition rate was obtained using Taro Yamane formula.

Sample size and sampling: Five schools were randomly selected from ten public schools in Eleyele using balloting, while participating students were selected from their respective classes using systematic sampling technique. The class register was used as a sampling frame and a sampling interval was calculated first to get the Kth number using the class register. This was done by dividing the total population of the Kth case with the sample size. K=N/n. Using the sampling interval that was calculated, from 1- kth a respondent was selected by balloting e.g candidate no 3 selected yes then that was the first candidate and using the Kth as a determinant, the next person was selected, however were the selected person was not willing to participate or is absent the very next person was selected

and the next kth number after then follows. This was done until the allotted numbers of participants were selected. The selected participants were given parental consent letter to give to their parents and to return the letter the next day.

Instrument: The study utilized a structured self-administered questionnaire which was developed by the researchers from reviewed literature.. The questionnaire covered information on socio-demographic data, knowledge of COVID-19, protective and preventive measures of COVID-19, Psychological and social Experiences during the COVID-19 Lockdown.

Institutional Review Board: The study protocol was duly reviewed and approved by UI/UCH Institutional Review Committee with approval number **UI/EC/20/0365.** Formal permission was obtained from the school principals. Written parental consent was obtained, as well as informed consent from the participants. Introduction of self and details about the questionnaire were carried out before distribution and data was collected from only students that have parental consent. Voluntariness, confidentiality, opportunity to decline at any stage was discussed with the participants. The data collection process lasted for five days.

Statistical Analysis: The data obtained were properly screened for errors and completeness. The data were coded into computer using Statistical Package for Social Sciences (SPSS) version 25. The analysis was done using descriptive and inferential statistics of chi-square test at 0.05% level of significance.

Results

Socio-demographic characteristics of Respondents: More than half of the respondents (55.7%) are between 15-19 years with mean age of 14.66 ± 1.910. More than half (57.1%) are females and (54.3%) are in SS3. Majority (84.7%) are from Yoruba ethnic group. Also, (56.8%) are from Oyo state and most (71.6%) live with both parents. Majority

(85.6%) of the parents are married. Details are shown in table 1

Sources of information about COVID-19: Majority (88.9%) got information from television adverts, newspaper 79.5%, government official website 60.5%, NCDC website 79.0%, Presidential task force update on radio/TV 78.1%, Nurses/Doctors/Health workers 77.8%. Details are shown in table 2.

Knowledge of causes / incubation period / transmission of COVID -19: Majority (98.3%) knew what COVID-19 is, 54.8% knew the cause of COVID-19, more than half (55.4%) believed that COVID-19 can be contacted from a dead person and majority (77.6%) correctly indicated that COVID-19 can be contacted through sneezing and nasal droplets 71.0%. Details are shown in table 3. The score ranges from zero to twelve. The minimum obtained score was 2, while the maximum obtained score was 10 with mean of 6.29 ± 1.427. Values from mean score and above were categorized as good knowledge. More than half (68.2%) had good knowledge of the causes, incubation period and transmission of COVID-19. Details are shown in fig. 1

Knowledge of signs and symptoms of COVID-19: Majority (85.5%) correctly indicated fever as a symptom of COVID-19, dry cough 86.9%, cough with sputum 81.5%, aches and pain 54.0%, headache 65.1%, sore-throat 62.8%. Details are shown in the table 4. The score ranges from zero to fourteen. The minimum obtained score was 1, while the maximum obtained score was 14 with mean of 7.59 ± 2.395. Values from mean score and above were categorized as good knowledge. More than half (68.8%) had good knowledge of the signs and symptoms of COVID-19. Details are shown in fig. 1

Knowledge of risk factors of COVID-19: Majority (86.1) correctly indicated that not wearing face mask increases a person's risk of contracting COVID-19, traveling to highly infected area 85.5%, contact with infected person 85.2%, people with underlying conditions 51.1% were all correctly indicated as risk factors of COVID-19. Details are shown in table 5. The score ranges from zero to seven. The minimum obtained score was 0, while the maximum obtained score was 7 with mean of 4.32 ± 1.460. Values from mean score and above were graded as good knowledge. More than half (73.6%) had good knowledge of risk factors of COVID-19. Details are shown in fig. 1

Knowledge of preventive measures of COVID-19: The correct preventive measures indicated by the respondents include: washing hands with soap under running water for 20seconds 91.8%, not touching your nose, mouth and eyes with unwashed hands 85.2%, wearing hand gloves and discarding it in a closed bin 88.1%, use of alcohol base hand sanitizer 88.9%, avoiding contact with infected people 87.5% and to quarantine people coming from a highly infected area 82.4%. Details are shown in table 6. The minimum obtained score was 3, while the maximum obtained score was 19 with mean of 10.98 ± 3.283. Values from mean score and above were graded as good knowledge. More than half (63.9%) of the respondents had good knowledge of preventive measures of COVID-19. Details are shown in fig. 1

Knowledge of preliminary actions for management of COVID-19: The correct preliminary actions for management of COVID-19 indicated by the respondents include isolation 55.1%, call local COVID-19 helpline 85.5%, and to quarantine for 14 days 78.7. Details are shown in the table 7. The score ranges from zero to six. The minimum obtained score was 0, while the maximum obtained score was 6 with mean of 3.26 ± 1.280. Values from mean score and above were graded as good knowledge. More than half (74.4%) of the respondents had good knowledge of preliminary actions for management of COVID-19. Details are shown in fig. 1

Overall (cumulative) level of knowledge of COVID-19: The total score ranges from zero to sixty-six. The minimum obtained score was 20, while the maximum obtained score was 55 with mean of 37.16 ± 6.453. Values from mean score and above were categorized as good knowledge. More than half (58.8%) had good knowledge of COVID-19. Details are shown in fig. 2

Protective and preventive practices of COVID-19: Protective and preventive practices of COVID-19 observed by the respondents include: staying at home as much as possible 88.9%, going out only for essential purposes 77.6%, using face mask 94.3%, washing face mask after one use or disposed it 90.6%, washing hands on getting home from outing 93.5%, washing hands at school 93.5%, using face mask in the class 95.5%, using hand sanitizer 90.9%, maintain safe distance of 2m, 93.5%. Details are shown in table 8.

Psychological Experiences during the COVID-19 Lockdown: More than one-third (47.7%) strongly agreed they felt less intellectually stimulated, 51.1% were becoming easily annoyed or irritable,41.2% spent a lot of time thinking, 44.3% had trouble falling or staying asleep, 40.6% lost interest in what they normally do, 38.6% felt anxious most of the time, 26.4% had poor appetite. Details are shown in the table 9. The score ranges from one to fifty-two. The minimum obtained score was 14, while the maximum obtained score was 47 with mean of 28.47 ± 6.420. Values from mean score and above

were graded as positive psychological experience. More than half (56.0%) had positive psychological experience. Details are shown in fig. 3

Social Experiences during the COVID-19 Lockdown: Less than half (36.4%)felt like eating every time, 37.2% were communicating more using technology,37.2% experienced less physical contact,43.6% was not associating with friends in the school, 39.2% were learning new skills, 30.7% lost the interest of going to school, 37.5% had low level of activity, 38.6% were sticking to domestic work, 40.3% could not see people they wanted to see, 30.7% experienced boringness staying as family, 47.7% benefitted from the Oyo state online teaching on television, 47.2% missed most of the school on air program, 38.9% checked social media often, 33.0% was happy to resume school. Details are shown in the table 10. The score ranges from one to one hundred. The minimum obtained score was 51, while the maximum obtained score was 83 with mean of 65.65 ± 5.507. Values from mean score and above were graded as positive social experiences. More than half (57.7%) had positive social experience. Details are shown in fig. 4.

Hypotheses Testing: There was no significant association between psychological experiences 0.101). Also, there was no significant association between participants' level of knowledge of COVID-19 and social experiences during COVID-19 lockdown ($X = 1.928^a$, p-value = 0.192).

Table1:Socio-Demographic characteristics of Respondents

Variables	Frequency (352)	Percentage (%)
Age group (Years)		
10-14	152	43.2
15-19	196	55.7
20-24	4	1.1

Mean=14.66 ± 1.910		
Gender		
Female	201	57.1
Male	151	42.9
State of origin		
Oyo	200	56.8
Osun	30	8.5
Others	122	34.7
Class		
SS 3	191	54.3
JSS 3	161	45.7
Ethnic group		
Yoruba	289	84.7
Hausa	13	3.7
Igbo	41	11.6
Parental marital status		
Single	29	8.2
Married	302	85.8
Others	21	5.9
Type of family		
Monogamous	230	65.3
Polygamous	78	22.2
Single parent	4	12.5

Table 2: Respondents' Sources of information about COVID-19 (Multiple Responses)

Sources of informationN=352	Yes		No	
	Freq.	%	Freq.	%
Social media	319	90.6	33	9.4
Newspaper	280	79.5	72	20.5
Television adverts	313	88.9	39	11.1
Presidential task force update on radio/TV	275	78.1	77	21.9
Government official website	213	60.5	139	39.5
NCDC website	278	79.0	74	21.0
Nurses/Doctors/health workers	274	77.8	78	22.2

Table 3: knowledge of causes / incubation period / transmission of COVID -19   N=352

Knowledge about COVID-19 N=352	Yes F (%)		No F (%)	
	Freq.	No	Freq.	No
COVID-19 is caused by a virus	193	54.8	159	45.2
COVID-19 is a disease that is caused by a virus that can spread from person to person	346	98.3	6	1.7
The incubation period of COVID-19	186	52.8	166	47.2
Primary mode of transmission of COVID-19 Through food	327	92.9	25	7.1
Through air	176	50	176	50
Through direct contact with someone who just arrived from a highly infected area e.g. China	202	57.4	150	42.6
Through kissing	109	31.0	243	69.0
Through sneezing	273	77.6	79	22.4
Through fecal oral route	34	9.4	318	90.8
Through direct contact with infected tissue used by a person infected with COVID-19	131	37.2	221	62.8
Through direct contact with the nasal droplets or discharge or saliva of an infected person	102	29.0	250	71.0
COVID-19 can be contracted from a dead person	195	55.4	157	44.6

Table 4: knowledge of signs and symptoms of COVID-19 N=352

Signs and symptoms of COVID-19	Correct		Incorrect	
	Freq.	**%**	**Freq.**	**%**
Aches and pain	190	54.0	162	46.0
Cough with sputum	287	81.5	65	18.5
Diarrhea	107	30.4	245	69.6
Dry cough	306	86.9	46	13.1
Fever (high body temperature)	301	85.5	51	14.5
Nasal congestion	138	39.2	214	60.8
Rashes	211	59.9	141	40.1
Sore-throat	221	62.8	313	37.2
Headache	229	65.1	123	34.9
Stiff neck	161	45.7	191	54.3
Tiredness	169	48.0	183	52.0
Vomiting	88	25.0	264	75.0
Loss of sense of smell	135	38.4	217	61.6
Loss of sense of taste	127	36.1	225	63.9

Table 5: Respondents' knowledge of risk factors of COVID-19   N=352

Risk factors of COVID-19	Correct		Incorrect	
	Freq.	**%**	**Freq**	**%**
Anyone who does not wear face masks always	303	86.1	49	13.9
Anybody who has travelled to a highly infected area	301	85.5	51	14.5
Anybody who comes into contact with someone infected with COVID-19	300	85.2	52	14.8
Older people from 65 years and above	165	46.9	187	53.1
Obessed people	100	28.4	252	71.6
People with underlying conditions such as diabetes, Hypertension, kidney problem etc	180	51.1	172	48.9
Students who come to school to learn	170	48.3	182	51.7

Table 6: knowledge of preventive measures of COVID-19   N=352

Preventive measures	Correct		Incorrect	
Ways of preventing COVID-19 infection	Freq.1	%	Freq.	%
Taking chloroquine tablets everyday	93	54.8	159	45.2
Praying and fasting for many days	165	46.9	187	53.1
Washing hands with soap under running water for 20 seconds frequently	323	91.8	29	8.2
Drinking herbal preparations everyday	132	37.5	220	62.5
Staying at home always	275	78.1	77	21.9
Quarantine anyone visiting your home for 14 days if they are coming from highly infected area	263	74.4	89	25.3
Rubbing alcohol base hand sanitizer on your hands	313	88.9	39	11.1
Gargling warm saline (salt and water)	128	36.4	224	63.6
Eating garlic regularly	99	28.1	253	71.9
Drinking black seed oil regularly	179	50.9	173	49.1
Taking pneumococcal vaccination	136	38.6	216	61.4
Avoid touching your nose, mouth and eyes with unwashed hands	300	85.2	52	14.8
Wearing hand gloves and discarding it in a closed bin	310	88.1	42	11.9
Taking antibiotics regularly	114	32.4	238	67.6
Avoid contact with infected people	308	87.5	44	12.5
Avoid using phones that supports 5G	153	43.5	199	56.5
Distance to observe when practicing social	71	29.2	281	79.8
An individual who has visited a highly infected area or makes contact with a COVID-19 infected patient should:				
Quarantine for 14 days	290	82.4	62	17.6
Call the local COVID-19 helpline or the appropriate authority immediately	31	8.8	321	91.2
Go straight to the hospital	42	11.9	310	88.1

Table 7: knowledge of preliminary actions for management of COVID-19 N=352

| Preliminary actions for management of COVID-19	Correct		Incorrect	
An individual who starts experiencing symptoms suggestive of COVID-19 should	Freq.	%	Freq.	%
Go straight to hospital	26	7.4	326	92.6
Isolate 2 days before onset of symptoms and 10 days from onset of symptoms till symptoms disappear	194	55.1	158	44.9
Quarantine for 14 days	227	78.7	75	21.3
Call the local COVID-19 helpline or the appropriate authority immediately	301	85.5	51	14.5
Stay at home and treat myself with chloroquine, garlic, black seed oil, gargling of warm water etc	163	46.3	189	53.7
Visit my religious leader (herbalist/pastor/Imam)	185	52.6	167	47.4
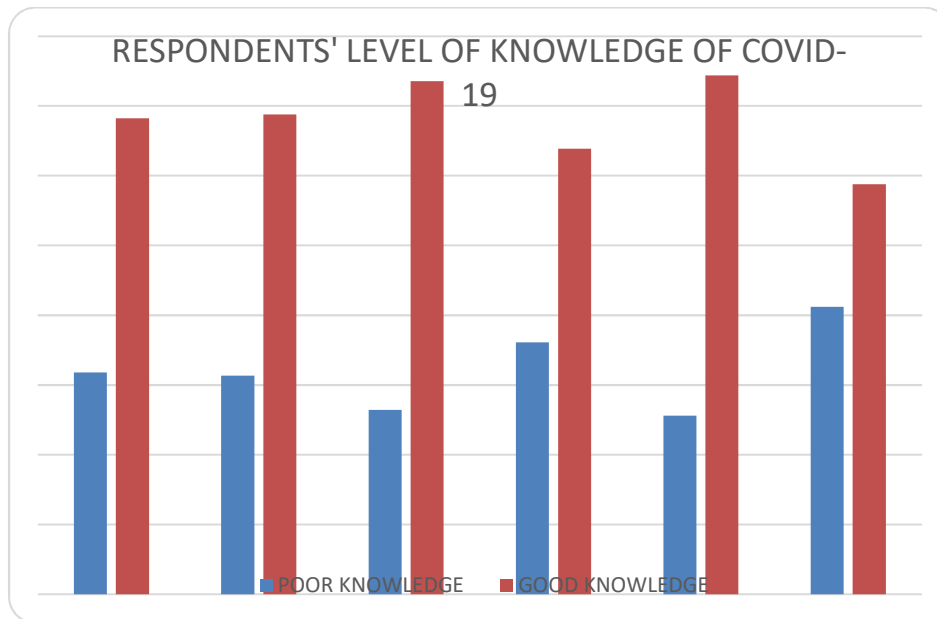
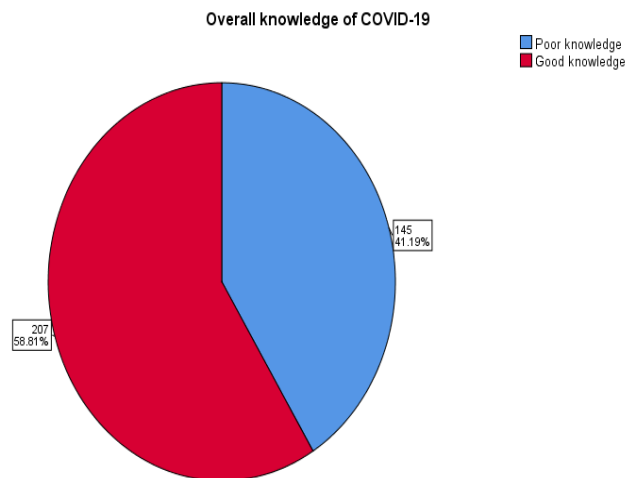Fig.1: Respondents' various levels of knowledge of COVID-19

Fig. 2: Respondents' overall knowledge of COVID -19

Table 8: Protective and preventive practices of COVID-19. N=352

Protective and preventive practices	Yes		No		I don't know	
	Freq.	%	Freq.	%	Freq.	%
I stay at home as much as possible	313*	88.9	31	8.8	8	2.3
I go out whenever I desire	109	31.0	224*	63.6	19	5.5
I go out only for essential purposes	273*	77.6	55	15.6	24	6.8
I use face mask every time I go out	332*	94.3	18	5.1	2	0.6
I wash my face mask after one use or dispose it	319*	90.6	25	7.1	8	2.3
I drink herbal mixtures every day	132	37.5	199*	56.5	21	6.0
I take vitamin C and fruits daily	259	73.6	77*	21.9	16	4.5
I wash hands whenever I get back home from any outing	329*	93.5	13	3.7	10	2.8
I wash hands when I get to school	329*	93.5	17	4.8	6	1.7
I use my face mask in the class	336*	95.5	12	3.4	4	1.1
I use hand sanitizer whenever I touch any surface	320*	90.9	29	8.2	3	0.9
I maintain a safe distance of 2m when talking to people	329*	93.5	16	4.5	7	2.0
I ensured that visitors wash their Hands before entering our home	327*	92.9	17	4.8	8	2.3

*correct answers selected by the respondents

Table 9: Psychological Experiences of students during the COVID-19 Lockdown

Psychological experiences(N=352)	SA	A	D	SD
	F (%)	F (%)	F (%)	F (%)
I feel less intellectually stimulated	168(47.7)	94(26.7)	60(17.0)	30(8.5)
I have more time for positive self reflection	120(34.1)	133(37.8)	68(19.3)	31(8.8)
I feel unhappy and depressed	147(41.8)	105(29.8)	71(20.2)	29(8.2)
I spent a lot of time thinking of what would happen if I become physically unwell	145(41.2)	120(34.1)	52(14.8)	35(9.9)
I have lost interest in what I normally do	143(40.6)	107(30.4)	66(18.8)	36(10.2)
I feel anxious most of the time	136(38.6)	117(33.2)	68(19.3)	31(8.8)
Am becoming easily annoyed or irritable because of prolonged stay at home	180(51.1)	104(29.5)	44(12.5)	24(6.8)
Feeling afraid as if something awful might happen	136(38.6)	116(33.0)	52(14.8)	48(13.6)
I feel down, depressed and hopeless	156(44.3)	87(24.7)	63(17.9)	46(13.1)
I have trouble falling or staying asleep	131(37.2)	107(30.4)	66(18.8)	48(13.6)
I feel tired or having little energy	115(32.7)	104(29.5)	85(24.1)	48(13.6)
I have poor appetite	93(26.4)	95(27.0)	88(25.0)	76(21.6)
Trouble concentrating in things such as reading	130(36.9)	93(26.4)	65(18.5)	64(12.2)

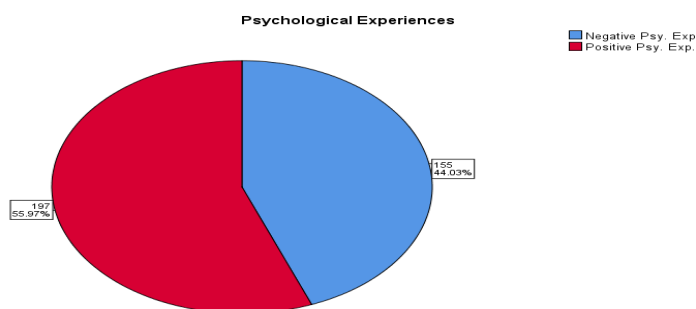SA=Strongly Agree, A=Agree, D=Disagree, SD=Strongly Disagree

Fig. 3: Respondents' psychological Experiences during COVID-19 lockdown

Table 10: Social Experiences of students during the COVID-19 Lockdown   (N=352)

Social Experiences	SA F (%)	A F (%)	D F (%)	SD F (%)
My level of activity is low	132(37.5)	118(33.5)	58(16.5)	44(12.5)
I am talking to people more	99(28.1)	124(35.2)	88(25.0)	41(11.6)
I help my younger siblings	167(47.4)	144(40.9)	33(9.4)	8(2.3)
My siblings and I are much more closer now	137(38.9)	141(40.1)	51(14.5)	23(6.5)
I find it difficult staying with my siblings	80(22.7)	101(28.7)	93(26.4)	78(22.2)
It was boring staying as a family	90(25.6)	108(30.7)	81(23.0)	73(20.7)
It was stressful been under my parents'/guardian close watch	99(28.1)	105(29.8)	86(24.4)	62(17.6)
My parents were able to help me with my school work	125(35.5)	136(38.6)	60(17.0)	31(8.8)
Nobody could help with school work since I could not attend any lesson	108(30.7)	101(28.7)	77(21.9)	66(18.8)
The Oyo state online teaching on television was helpful	168(47.7)	119(33.8)	46(13.1)	19(5.4)
Due to poor electricity supply I missed most of the school on air program	166(47.2)	122(34.7)	39(11.1)	25(7.1)
The school online program did not meet my needs	124(35.2)	93(26.4)	101(28.7)	34(9.7)
I have gained so much weight during this lockdown	133(37.8)	107(30.4)	71(20.2)	41(11.6)
I cannot see the people I want to see, it makes life boring	142(40.3)	124(35.2)	52(14.8)	34(9.7)
I am spending more time in bed	123(34.9)	105(29.8)	76(21.6)	48(13.6)
I watch films excessively	124(35.2)	116(33.0)	59(16.8)	53(15.1)

SA=Strongly Agree, A=Agree, D=Disagree, SD=Strongly Disagree

Social Experiences

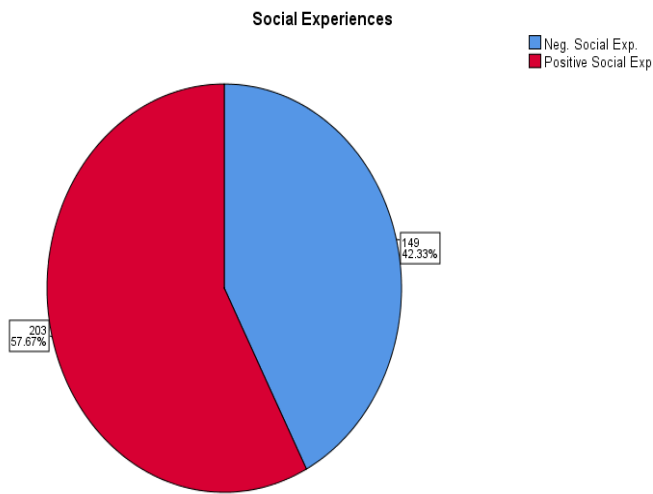Neg. Social Exp.
Positive Social Exp.

149
42.33%

203
57.67%

Fig. 4: Respondents' social Experiences during the COVID-19 lockdown

Table 11:Cross – tabulation of Respondent's level of knowledge, psychological and socialexperiences during the COVID-19 lockdown

Total knowledge group						
	Poor	Good	X^2 –value	Df	P-valued	Remark
Psychological experiences						
Negative	48.3%	40.9%	2.997[a]	1	0.101	Not significant
Positive	51.7%	59.1%				
Social experiences						
Negative	47.7%	38.4%	1.928[a]	1	0.192	Not significant
Positive	52.3%	61.6%				

Fishers' Exact test was used in both

Discussion

Socio demography of respondents: More than half of the respondents are between 15-19 years with the mean age of 14.66 ± 1.910. Three quarter of the in-school adolescents are females and more than half are in SS3.This is similar to the study conducted by Roy, Tripathy and Kaushal (2020) among Indian population where all the participants are above the age of 18 years. This is contrary to the study conducted by Zhou et al. (2020) among HCWs in China were nearly half of the study respondents (46.5%) are nurses and 36.48% are doctors, 35.96% had over nine years of work experience. They based their work mainly on qualified health personnel who are experienced in the field, while this study focused on secondary school students.

Knowledge of COVID-19: Most (58.8%) of respondents were well informed with COVID-19 related knowledge indicating that effective health education was delivered by the massive public education campaigns (especially via television adverts, NCDC website). Though the pandemic came suddenly and made a global impact, however, there is so much media information hence it was not surprising that participants level of knowledge of causes, incubation period, risk factors are good. Also given the fact that there was a lockdown and there was plenty of time to just acquire information. This finding is in line with the study conducted by Roy, Tripathy and Kaushal (2020) among Indian population where considerable number of the respondents were aware of the basic elements of COVID-19, barely a third of the respondents correctly answered that the virus spreads through touching, kissing, sneezing and food, while a little less than half regarded COVID-19 as a highly contagious disease. The result is also in line with what was observed by Zhou et al. (2020) among HCWs in China where respondents have increased access to information related to COVID-19 and showed good knowledge about COVID-19. It is also consistent with the study of Peng et al. (2020) among undergraduates in China which revealed that appropriate knowledge was acquired by 82.34% of the respondents. This could be explained by increased availability and accessibility of information. On the contrary, this finding is not in line with the findings of Bhagavathula et al. (2020) among participants globally which revealed that participants' knowledge of questions related to the mode of transmission and incubation period was poor. It is also contrary to the findings of Farhana & Mannan (2020) in Bangladesh which revealed that significant proportion of the respondents had poor knowledge of transmission and symptoms of COVID-19. Also, studies conducted by Olapegba et al. (2020) among Nigerian population revealed deficient COVID-19 related knowledge among respondents. This variation might be due to the timing of data collection which may be at the very onset of the pandemic while our data collection was few months after the lockdown.

Protective and preventive practices of COVID-19: The students displayed positive protective and preventive practices as majority use of face mask, washed their hands frequently and used alcohol base sanitizer. More than half stayed at home as much as possible indicating that effective health education was delivered by the massive public education campaigns (especially via television adverts, NCDC website etc). This is in line with the findings of Azlan et al. in Malaysia where most participants were taking precautions such as avoiding crowd (83.4%), practicing proper hand hygiene (87.8%) and wearing face mask (51.2%). Similarly, the scooping review by Adhikari et al. (2020) observed various preventive measures against COVID-19 practiced by their respondents, which includes: use of face mask, hand hygiene practices, avoidance of public contacts, case detection, case tracing and quarantine. This result is also consistent with the findings of Modi et al. (2020) in Mumbai metropolitan region which observed that more than three-fourths of the respondents were aware of the various infection control measures like rapid triage, respiratory hygiene, and cough etiquette and having a separate, well ventilated waiting area for suspected COVID-19 patients.

Psychological and social Experiences of COVID-19: More than half of the students showed positive psychological and social experiences. This could be explained by the fact that these are secondary school students who had acquired adequate COVID-19 related knowledge which goes a long way to mitigate panic and produced positive adjustment in them (Peng et al., 2020). This is contrary to the findings of Wang et al. (2020) and Dai et al.

(2020) in China where both revealed that people developed anxiety and depression following the outbreak of COVID-19. This could be explained by the fact that COVID-19 outbreak first occurred in China and Wuhan being the epicenter, there was little or no COVID-19 related knowledge which could mitigate panic and guide the people as of then (Peng et al., 2020). In addition, Dai et al. (2020) opined that the psychological distressed experienced among the health care workers might be due to their participation in frontline treatment, having been isolated and having family members or colleagues infected. Findings of the study conducted by Daisy et al. (2020) in UK revealed that the social experiences encountered by majority of the participants include: loneliness diminished social interactions, maintaining social distancing, and staying at home which lead to over-crowded households especially among individuals with lower household income. This could be due to differences in target population as the study was conducted among adults who were not engaged with any online studies to keep them busy during the lockdown period, while the secondary school students in Oyo state were frequently occupied online by Oyo state School-On-Air, the program being run on the radio and television channels of the Broadcasting Corporation of Oyo State (BCOS). This helped to ease tension, loneliness and promoted social interactions among the students (Oyo State ICT, 2020).

Hypotheses : This study revealed that there was no significant association between psychological experiences (p-value =0.101), social experiences (p-value =0.192) and level of knowledge of COVID-19. This is contrary with Peng et al. (2020) who stated that COVID-19 related knowledge has impact on the psychological wellbeing as it goes a long way towards mitigating panic.

Conclusion and recommendation : This study revealed that more than half of the respondents had good knowledge of COVID-19, positive psychological and social experiences. Indicating that effective health education was delivered by the massive public education campaigns (especially via television adverts, NCDC website and some other television and radio programmes). The protective practices against COVID-19 identified among the respondents includes: regular wearing of face mask, frequent washing of hands, use of alcohol based hand sanitizer, and staying at home as much as possible. There are some protective practices observed among the students that are not appropriate such as use of herbal mixtures, indiscriminate use of vitamin C. Urgent action needs to be taken to properly reorient them on the right protective practices. The schools should continue to ensure dissemination of right and needed information to the students. As it has shown that the adequate COVID-19 related knowledge acquired by these students helped to mitigate panic and produced positive wellbeing.

References

Adhikari, S.P., Meng, S., Wu, Y.J., Mao, Y.P., Ye, R.,X., Wang, Q.Z., Sun, C., Sylvia, S., Rozelle, S., Raat, H. & Zhou, H. (2020). Epidemiology, causes, clinical manifestation and diagnosis, prevention and control of coronavirus disease (COVID-19) during the early outbreak period: a scoping review. Infectious Diseases of Poverty 9:29 https://doi.org/10.1186/s40249-020-00646-x.

Ayodamola O. (2020). "Update: Coronavirus: Second case confirmed in Nigeria". Premium Times.https://www.health.gov.ng/index.php?option=com_k2&view=item&id=620:nigeria-confirms-second-case-of-covid-19

Azlan, A.A., Hamzah, M.R., Sern, T.J., Ayub, S.H. & Mohamad, E. (2020). Public knowledge, attitudes and practices towards COVID-19: A cross-sectional study in Malaysia. PLoS ONE 15(5): e0233668. https://doi.org/10.1371/journal.pone.0233668

Bhagavathula, A.S., Aldhaleei, W.A., Rahmani, J., Mohammad, J., Mahabadi, A. & Bandari, D.K. (2020). Knowledge and Perceptions of COVID-19 Among Health Care Workers: Cross-Sectional Study. JMIR Public Health Surveill; 6 (2) e19160 | p. 1-5

Burrell, C.J., Howard, C.R., & Murphy, F.A. (2017). Coronaviruses: Fenner and White's Medical

Virology (Fifth Edition) Academic Press; London: pp. 437–446. [Google Scholar]

Chen, N. (2020). Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: A descriptive study. Lancet. 395, 507–513. [CrossRef]

Dai, Y., Hu, G., Xiong, H., Qiu, H., & Yuan, X. (2020). Psychological impact of the coronavirus disease 2019 (COVID-19) outbreak on healthcare workers in China doi: https://doi.org/10.1101/2020.03.03.20030874

Daisy, F., Feifei, B., Hei, W.M., & Andrew S. (2020). Psychological and social experiences of adults living in the UK during the Covid-19 pandemic. Nuffield Foundation

Emorinken (2020). First death recorded as confirmed cases rise to 36. The nation newspaper.

Farhana, K.M. & Mannan, K.A. (2020). Knowledge and perception towards Novel Coronavirus (COVID 19) in Bangladesh. International Research Journal of Business and Social Science. 6 (2) pp 2411-3646.

Horton, R. Offline: 2019-nCoV—"A desperate plea". Lancet 2020, 395, 400. [Google Scholar]

Li, Q. (2020). Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia. N. Engl. J. Med. [Google Scholar]

Mbah, F. (2020) Nigeria announces Lockdown of major cities to curb Coronavirus. www.aljazeera.com

Modi, P. D., Nair, G., Uppe, A., Modi, J., Tuppekar, B., Gharpure, A.S., & Langade, D. (2020). COVID-19 Awareness Among Healthcare Students and Professionals in Mumbai Metropolitan Region: A Questionnaire-Based Survey. Cureus 12(4): e7514. DOI 10.7759/cureus.75141000

Nigerian Center for Disease Control. (2020). First case of COVID-19 in Nigeria. Retrieved from www.ncdc.gov.ng March, 2020.

Nishiura, H. (2020). The Rate of Under ascertainment of Novel Coronavirus (2019-nCoV) Infection: Estimation Using Japanese Passengers Data on Evacuation Flights. J. Clin. Med.9, 419. [CrossRef]

Olapegba, P.O., Steven, K. Iorfa SK and Ayandele O. (2020). Survey data of COVID-19-related Knowledge, Risk Perceptions and Precautionary Behavior among Nigerians. Data in Brief. 50: 105685

Oyo State ICT (2020). Oyo State School-On-Air. https://oyostate.gov.ng/oyo-state-school-on-air-airtel-to-give-500mb-data-to-each-participating-student/

Peng, Y., Pei, C., Zheng, Y., Wang J., Zhang K., Zheng Z., Zhu P. (2020). A cross-sectional survey of knowledge, attitude and practice associated with COVID-19 among undergraduate students in China. BMC Public Health 20, 1292 https://doi.org/10.1186/s12889-020-09392-z

Rothe, C. (2020). Transmission of 2019-nCoV Infection from an Asymptomatic Contact in Germany. N. Engl. J. Med. [CrossRef]

Roy, D., Tripathy, S. & Kaushal, V. (2020). Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. Asian Journal of Psychiatry 51:102083

Wang, C. (2020). A novel coronavirus outbreak of global health concern. Lancet. 395, 470–473.

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Cyrus, S. & Roger, C. (2020). Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population in China. Int. J. Environ. Res. Public Health. 17, 1729; doi:10.3390/ijerph17051729. 1000www.mdpi.com/journal/ijerph

World Health Organization (2020). Rolling Updates on Coronavirus Disease (COVID-19) URL https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen (Accessed 3.31.20) [Google Scholar]

Xiang, Y.-T. (2020). Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. Lancet Psychiatry. 7, 228–229. [Google Scholar] [CrossRef]

Zhou, M., Tang, F., Wang, Y., Nie, H., Zhang, L., You, G., & Zhang, M. (2020). Knowledge, attitude and practice regarding COVID-19 among health care workers in Henan, China. Journal of Hospital Infection. https://doi.org/10.1016/j.jhin.2020.04.012