Use of facemasks during the covid-19 pandemic in southeastern Nigeria: an observational study

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Research

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Abstract

Background

The use of facemask for the control of the spread of COVID-19 virus among the population has been recommended by the health authorities. This observational study was carried out to assess the use of facemask in Southeastern Nigeria.

Methods

Using a two-stage sampling technique, a total of 3100 participants were observed from both rural and urban settings. Frequency distribution tables were used to categories and describe the observed variables, Chi-square (X^2) test was used to check for the association between categorical variables.

Results

Among the observed participants, 46.4% made use of facemask. The most common facemask used was cloth mask (28.6%). About 16.0% of the participants correctly used their facemasks. The highest usage was observed in the urban location (49.2%). A statistically significant association was found between facemask usage and study location ($p < 0.001$), also between the appropriateness of usage and age category ($p < 0.001$).

Conclusions

The observed rate of mask usage may not be able to protect the population against the spread of COVID-19, therefore adequate sensitization on the need for proper use of face masks by the public should be prioritized.

Background

Coronavirus disease 2019 (COVID-19), caused by the Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2), was first reported in Wuhan, China, in December of 2019 [1]. Since then, the virus had spread to the other parts of the world. Report from the Africa Centers for Disease Control and Prevention (ACDC) confirmed that cases of COVID-19 had risen to almost 8 million in the African region, and over 190,000 deaths [2]. As of 4th September 2021, the West African sub-region accounted for about 8.7% of cumulative COVID-19 prevalence in Africa [2]. By the 4th of September 2021, Nigeria had recorded 197,088 confirmed cases of COVID-19 with a total of 2,495 mortality [3]. These figures have been projected to increase, due to the reproduction number (R0) of SARS-CoV-2 [3].The R0 estimates ranges from 1.4 to 6.49.3 [4, 5]. Globally, serious response had been instituted against the disease as a result of its high infectivity and high case fatality rate especially in Europe and America [6].

The virus spreads from an infected person's mouth and nostrils in form of droplets or droplet nuclei to a susceptible host when the infectedperson coughs, sneezes, speaks, and breathe [7]. Current evidence suggests that the virus spreads mainly between people who are in close contact with each other, typically within 1 metre [8].

The fact that the currently approved vaccine does not confer absolute protection against COVID-19 infection means that the population have to rely upon the precautionary guidelines provided by the WHO and the NCDC, including the wearing of facemasks in the public to mitigate the spread of the virus [9]. Facemasks provide physical barrier between the mouth and nose of the wearer and potential contaminants in the immediate environment including from his own hands [10]. Unfortunately, there is a wide-spread misuse and abuse of facemasks in Nigeria [11]. The Nigeria media is inundated with images of members of the general public, including healthcare workers and government officials, wearing facemasks on their jaws and necks, without covering their mouth and nostrils. Some only cover their mouths with the masks while their nostrils are left wide opened [12]. Many people who use facemasks are commonly observed to pull down their mask to their jaw to talk and then pull it back over their mouth and nose after talking. In African countries,most especially in Nigeria, different varieties of cloth masks of doubtful efficacy are being hawked and sold on the streets; these facemasks are first tried on by different wearers before deciding on purchase [12].

People are also observed to repeatedly touch the front of their facemasks in a bid to adjust the mask, to remove it, or during reflex touching of the face[12]. Some wear one mask for prolonged periods, without replacement even, when it became wet or soiled. The rising spate of misuse and abuse of facemasks is a source of worry for the Nigerian COVID-19 Presidential Task Force who had observed the improper, unhygienic and ill-advised use and sharing of masks, especially multiple fittings before buying from vendors [13].

The use of facemasks for COVID-19 prevention is important, as recent studies indicated that a significant proportion of people who have COVID-19 do not show symptoms (asymptomatic), and these people can shed the virus and spread it even before they realize that they are infected [14, 7].

There is evidence that the correct use of facemasks reduces the risk of COVID-19 infection [15, 1]. In the light of the established importance of facemask usage in curbing the spread of COVID-19, it is, therefore, important that facemask usage and everything surrounding it (quality and mode of use) among the people be accessed. This assessment will inform health education material development and help identify policy direction for infection control.

Materials And Methods

Study Design

The study employed an observational cross-sectional study design. Observational studies, also called epidemiological studies, are conducted in such a way that the researcher has no influence on the study

phenomenon [16].

Study Area

The study was conducted in Owerri, Imo state, Nigeria. Owerri is the capital of Imo State, located in the South-eastern geopolitical zone of the country and lies on Latitude 5.486^0N and Longitude 7.035^0E. Owerri has three different Local Government Areas- Owerri Municipality, Owerri North and Owerri West. The city has an estimated population of 401,873 people as of 2006 but projected to about 516,610 in 2015 (National Population Commission, 2006) with total land area is 550.848 km^2 from the city. With a well-developed road network, Owerri is the hub of economic and industrial activities for people in and around the entire South-Eastern geopolitical zone [17].

Study Population

The populations surveyed were members of the public in both urban and rural communities in Owerri, Imo state, Nigeria. This population cuts across several sectors of the economy. Some are in civil service and other cooperate professions (white collar), the rest are students, traders, and artisans. Owerri is known as an entertainment hub; tourists and travelers always troop into the city.Thissituation is an important driver of the transmission and spread of COVID-19.

All obviously sane adult and youth members of the study area who are present at the selected study sites at the time of data collection were all included in the study.

Sample Size

After the population of each of the settings were been estimated, sample size determination table was then used to determine the required sample for each of the sites [18]. Table 1 shows the estimated numbers of people in the various study sites and the corresponding sample sizes as determined with the sample size determination table.

Sampling

Owerri was purposively selected as the study site for being the Imo State capital,therefore a true representation of the situation in the state. Owerri west and Owerri North were, however, included as study sites because of their proximity to Owerri municipal (State capital) and for their being rural areas. In each of the study areas, one setting each (bank, hospital, school, commuter motor part, church and market) was selected as the study site.

In the various study sites, every eligible individual that visited were observed for the variables of interest, making sure not to observe an individual twice. This was done until the required sample size was arrived

at.

Data Collection Tool

The study data was collected using a standardized observation checklist (OCL). The OCL was designed to obtain information on the location, setting, time, gender, age category, facemask use, type of facemask, condition of the facemask and mode of facemask use of people in the study area.

On the checklist, location was described as urban and rural; and study sites were: churches, market/business premises, school, commuter park, bank, and health facilities. The time options included morning, afternoon and evening. Age groups observed were adolescent, adults and the elderly. The different types of facemasks listed were surgical mask, cloth mask and filtered mask. However, a space for others was added. Another important component of the checklist was the mode of facemask use which included: correct use, uncovered mouth and nose, uncovered nose, inside out and upside down.

After the OCL had been checked for relevance to the subject matter, clarity and appropriateness of language, the instrument was pre-tested in a setting and condition that is similar to that of the research study area. This was done not to report results but rather to check for glitches in wording, ambiguousness, lack of clarity of instructions etc. The structure and contents of the tool were later refined in the light of weaknesses spotted during the pretesting.

Data Collection

The research assistants positioned at strategic places around the study sites, careful enough not to allow the study candidates to be aware that they are being observed, the researchers also ensured that no single individual was observed twice as they went about their normal businesses. The observers then ticked the checklist based on what they observed in each location.

Demographic Characteristics and Frequency of the Use of Facemask

A total number of 3100 participants were observed in terms of facemask usage in Imo state (Table 2). Among the study participants, 861(27.8%) were observed from the rural areas and 2239(72.2%), were observed from the urban areas. Observation was carried out in the various settings as follows, bank 506(16.3%), church 290(9.4%), Commuter Park 563(18.2%), health facility 441(14.2%), market/business premises 779(25.1%) and school 521(16.8%). The most common age group in this study was adult (62.2%). About 1777(57.3%) of the observedindividualsweremales. Majority of the observation 1497(48.3%) was carried out in the morning and the least observation in the evening (12.9%). Among the observed participants, 1438(46.4%) used facemasks. The most common facemask used was cloth mask [887(28.6%)]. About 16%of the participants correctly used their facemasks. Only 499(16.1%) of the

participants wore facemasks that appeared to be clean. Also only 305 (10.0%) of the observed worefacemasks that appeared to be new.

Rate of facemasks usage by location, settings, time, gender and age group

Table 3 depicts the rate of facemasks usage by location, settings, time, gender and age group in the study area. The overall observed facemask usage was 46.4%. More facemask usage was observed in the urban area (49.2%) compared to the rural areas (39.0%). The health facility was the study site in which highest frequency of facemask usage was observed (74.4%), while the least facemask usage was observed in market/business premises (20.2%). Highest rate of facemasks usage was observed in the morning (52.0%) while it was lower in the evening (21%). Males (48.6%) used facemasks than the female (43.5%). Also, adolescents (47.8%) usedfacemasks more than other age group with the lowest usage observed among the children (20.5%).

Association between facemask usage and the demographic characteristics of candidates

Association between facemask usage and the demographic characteristics of respondents is depicted in table 4. A statistically significant association was found between facemask usage and location ($p<0.001$) as more candidates in the urban location made use of facemasks (49.2%) compared to candidates in the rural locations (39.0%).

Study sites were also found to be significantly associated with facemask usage ($p<0.001$), where more people in the bank made use of the facemasks (71.7%), and least usage was found in the market/business premises (20.2%).

More facemask usage was observed in the morning time (52.0%), the least usage was observed in the evening (21.2%), the association between time period and facemask usage was found to be statistically significant ($p<0.00$).

More males (48.6%) than females (43.5%) were observed to use facemasks. The association between gender and facemask usage wasstatistically significant ($p< 0.001$).

Age category was also found to be significantly associated with facemask usage ($p< 0.001$), as more adolescents (47.8%) made use of their facemasks compared to the elderly (46.8%) and the children (20.5%).

Association between modes of facemask usage with demographic characteristics of candidates

Table 5 shows the association between modes of facemask usage with demographic characteristics of study candidates. Study candidates from the rural location (61.9%) and the urban location (64.7%) who made use of facemasks wore them wrongly. The association between location and mode of facemask usage was, however, not significant ($p > 0.005$). In the banks, only 41.3% of the candidates with facemasks wore them correctly, this situation of correct facemask usage was 35% in the church, 34.4% in the commuter park, 37.8% in the market places, and 20.0% in the health facility. Also, no significant association was found between study sites and the mode of facemask usage ($p > 0.005$).More children (75.0%) wore their facemasks correctly compared to the adults (33.4%) and the elderly (33.2%). A statistically significant relationship was found between age categories of the study candidates and their mode of facemask usage ($p < 0.005$). Also, more males (37.3%) than females (33.9%) made use of their facemasks appropriately. The association between gender and facemask usage was not significant ($p > 0.005$).Meanwhile appropriate facemask usage was observed more in the evening (40.0%) than in the afternoon (34.3%) and in the morning (36.8%).The association between time of the day and mode of facemask usage was not statistically significant ($p > 0.005$).

Association between the condition of facemasks and thedemographic characteristics of study candidates

The association between the conditions of facemasks used and demographic characteristics of study candidates is shown in table 6. More people from the urban area had clean (35.9%) and new (22.1%) facemasks compared to people from the rural areas who had 30.7% and 19.7% clean and new facemasks respectively. More people from the urban area also had dirty (15.7%) compared to people in the rural areas (11.6%). The association between the condition and the quality of the facemask worn and the location of the candidates were found to be statistically significant ($p < 0.001$).

It was also found that the church had more people with clean (34.2%) facemasks, while the bank had more people with facemasks (27.1%). More individuals with worn-out facemasks were found in the market/business premises (40.0%). Overall, the association between the study sites and the condition of facemasks used was significant ($p < 0.001$).

More people were observed to put on clean facemasks in the afternoon (37.6%) compared to in the morning (34.6%) and in the evening time (16.5%). Whereas, more people were observed to put on new facemasks in the evening (28.2%) compared with in the morning (24.0%) and in the afternoon (17.0%). Worn-out facemasks were observed more in the evening (40.0%) compared to in the morning (26.1%) and in the afternoon (31.5%). The association between time of the day and the condition of the used facemask was found to be statistically significant ($p<0.001$).

More female had clean facemasks on (36.3%) compared to the males (33.6%). Ironically, more female had dirty facemasks on (17.0%) compared to the males (13.2%). More males, however, had worn-out facemasks on (32.3%) compared to the female (24.2%). The relationship between gender and the conditions of the facemasks was not significant ($p > 0.005$).

In the age category, the adults had more clean facemasks on (36.4%) compared to the other age categories. The elderly had more dirty facemasks on (21.3%) compared to the other age categories. The children had more new facemasks on (62.5%) compared to the other age categories, while the adolescents had more worn-outfacemasks on (36.6%) compared to the other age groups. The association between age category and the condition of the facemasks was also found to be significant ($p<0.001$)

Discussion

This study was conducted to observe the facemask usage habits of the Owerri residents in the light of the ravaging COVID-19 that is far from being over. Currently, COVID-19 has spread across many countries and territories leading to an ongoing pandemic which has claimed the lives of at least 4.5 million individuals worldwide; and which presents an unprecedented challenge to global public health[19].

One effective way to prevent the spread of this virus is through the proper use of facemask [8]. The Federal Government of Nigeria in 2021, therefore, enacted a law on the compulsory use of facemask in public places like schools, banks, market, hospitals, motor parks and places of religious worship [20].

This study then became imperative following the identification of proper facemask usage as an important measure that can help in the prevention and control of the disease [8], most especially in resource limited setting like Nigeria where the vaccination may not be able to reach more than 50% of the population [15].

The rate of use of facemasks found in this study was very low. This may be as a result of such factors as individual differences, feeling of inconvenience resulting from facemask usage, and beliefs that the COVID-19 is no more in existence [12]. Others responsible factors may include demographic and cultural characteristics of the observed participants, low implementation of the law on the use of facemask in public places, and the differences in the persceived prevalence of COVID-19 in the various places of data collection. Studies in countries inSouth Asia including [21].Singapore,India, United Arab Emirate and Saudi Arabia [22], found much more usage rate of facemasks during the COVID-19 pandemic. Thisindicatesthe possibility of also upscaling facemask usage in the study area and the rest ofNigeria as in other parts of the world if appropriate sensitization and enforcements are put in place.

The highest rate of facemasks usage/adherence was observed amongst the adolescentsthan people in other age categories. This is in contrast with previous studies which found adults to use facemasks more than adolescents[9, 23]. Access to COVID-19 information especially through the internet is more common among the adolescents; this may have played an important role in influencing the facemasks usage among them [9].

It was also found that the rate of facemasks usage was more in the urban area compared with the rural areas;this is similar toprevious report of more facemask usage in the urban areas [9]. This difference in facemask usage between the rural and the urban residentscould be mostly due to the difference in the socioeconomic statusesof people in the urban and the rural areas. There is also better access to health information by the urban dwellers; access to information has been shown to influence behavior [24].

Facemaskusage was lowest in the business/market premise. Although, this study was unable to capture the educational level of the observed candidates, but it is usually the case for the market traders to be of relatively low educational attainment [25]. If that be the case,it can explain the apathy towards use of facemasks as in other diease control protocolsas obseved among them. This is beacuseon the contrary, highly educated individuals have been shown severally to have better disposition towards disease control measures often occasioned by their being better informed[26].

Facemask usage was found to be higher in the mornings. This may be as a result of atmospheric conditions which are usually humane during the morning hours. Lowest rate of facemask usage were observd in the afternoons, improper usageof facemasks was also observed more the afternoons. This may be attributed to atmospheric condition which is usually hot and harsh in the afternoon, and which induces the feeling of discomfort while wearing the facemask. Again,[9], observed that the feeling of hotness as well as difficulty in breathing discouraged wearing facemasks always and suggested that more convenient alternatives such as face shield should be should be recommended during the afternoon.

Facemask usagewas significantly higher in males than in females in this study. This is in contrastwith a study in Saudi Arabia and in south Asian countries where there was higher usage amongst females than males[21, 23]. This contrast may be as a result of difference in cultural orientation particularly among femalesin the respective parts of the world.

The most commonly used facemask was the cloth facemask. This was also found in a similar study in other parts of Africa [27]. Theuse of cloth facemask is highly recommended by the US CDC because most people can afford it and the ease with which it can be managed when compared to the other types of facemasks [28, 29]. On the contrary, however, people in China [30]and Hong Kong [31] wore more of wore medical facemasks. This difference in facemask types used is likely due to the differences in the economic capacity of the observed populations as well as previous experiences with flu like illnesses, and possibly also beacuse the COVID-19 emanated from the later regions [8]. Majority of the observed individuals in Nigeria may not be able to afford medical facemask that will usually require replacement after a short period, unlike the cloth facemask that only requires constant washing, whichcan also be used for a fairly long period of time.

A lower proposion of individuals who wore facemasks as observed in this study, wore them correctly.Some were observed to betheir facemasks ‘inside-out’ or ‘upside-down’, some on the chin or lower jaw. The implications of improper wearing of the facemask are far reaching as it can aid the transmission of the virus.On the contrary, people in parts of the world [31, 27]have been observed to wear their facemaskscorrectly than what was observed in this study.The difference again maybe due to the

conciousness imbibed as a result of previous experiences with flu like illnesses, as well as appropriate sensitization on use of facemasks.

Among the different settings were observations were made, correct use of facemasks was observed more in the banks, not even in the health facilities.The banks are more enclosed and compact and therefore enforcement of use of face masks and other protocols is easier compared to other settings which are more open, without enforcement precautionary protocols. Significant relationship was found in the use of facemask and the location, settings, time, gender, and age groups, indicating that these factors are major determinants of facemask usage in the study population.

Limitations

The study, being and observational study could not assess some major demographic data like age, educational level, occupation and income. Also the study do not assess peoples reasons for not wearing a face mask. The ages of the participants were grouped according to children, adolescence and adult. A non-differential miss-classification could occur in the age grouping.

Conclusion

Overall, the level of facemask usage was low. At this level, there is no guarantee of protection of the public against COVID-19. It is, therefore, imperative that proper and intensive sensitization program for the promotion of positive behavior towards facemask usage be implemented. Also, compliance with the proper use of facemask is poor from the observations; awareness of the laws and regulations regarding the proper use of facemask seem to be low among the population, especially among the rural communities where access to information is suboptimal. Proper sensitization on the law and implementation is important to increasing the rate of facemask usage which in turn will reduce the spread of the virus.

Declarations

Ethics approval

Ethical approval for this study was given by the ethical committee of the School of Health Technology, FederalUniversity of Technology, Owerri, Nigeria.

Consent for publication

Not Applicable

Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

UMC conceptualized and designed the study; LAO, ABC,SCO, CFM, ARA collected data, JCO analysed data, AOB wrote the first draft of the manuscript, UMC and JCO reviewed the drafted manuscript. All authors' read and approved the final manuscript.

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Tables

Table 1: Sample size estimation table

Settings	Estimated population size	Sample size
School	25,000	378
Market	5000	357
Church	1200	291
Bank	200	132
Hospital	200	132
Commuter motor park	800	260
Total		**1550**

Table 2: Demographic Characteristics and Frequency of the use of Facemask in Imo State

Variable	Frequency (n)	Percent (%)
Location		
Rural	861	27.8
Urban	2239	72.2
Setting		
Bank	506	16.3
Church	290	9.4
Commuter Park	563	18.2
Health Facility	441	14.2
Market/Business Premises	779	25.1
School	521	16.8
Time		
Afternoon	1202	38.8
Evening	401	12.9
Morning	1497	48.3
Gender		
Female	1323	42.7
Male	1777	57.3
Age group		
Adolescent	624	20.1
Adult	1927	62.2
Children	117	3.8
Elderly	432	13.9
Facemask use		
No	1662	53.6
Yes	1438	46.4
Yes	1438	46.4

Type of facemask		
Cloth Mask	887	28.6
Filtered Mask	171	5.5
Surgical Mask	380	12.3
None	1662	53.6
Mode of facemask use		
Correct Use	517	16.7
Inside Out	129	4.2
Uncovered Mouth and Nose	589	19.0
Uncovered Nose	156	5.0
Upside Down	47	1.5
Condition of facemask		
Clean	499	16.1
Dirty	212	6.8
New	309	10.0
worn-out	418	13.5

Table 3: Rate of facemasks usage by location, settings, time, gender and age group

	Number of observation	Facemask usage	
		n	Facemask usage (%)
Overall facemasks usage	3100	1438	46.4
Location			
Rural	861	336	39.0
Urban	2239	1102	49.2
Setting			
Bank	506	363	71.7
Church	290	120	41.4
Commuter Park	563	224	39.8
Health Facility	441	328	74.4
Market/Business Premises	779	157	20.2
School	521	246	47.2
Time			
Afternoon	1202	575	47.8
Evening	401	85	21.2
Morning	1497	778	52.0
Gender			
Female	1323	575	43.5
Male	1777	863	48.6
Age group			
Adolescent	624	298	47.8
Adult	1927	914	47.4
Children	117	24	20.5
Elderly	432	202	46.8

Table 4: Association between facemasks usage and demographic characteristics of study candidates

	Facemask usage		Total	p-value
	Yes (%)	No (%)		
	n=1438	n=1662		
Location				
Rural	336(39.0)	525(61)	861	<0.001
Urban	1102(49.2)	1137(50.8)	2239	
Setting				
Bank	363(71.7)	143(28.3)	506	<0.001
Church	120(41.4)	170(58.6)	290	
Commuter Park	224(39.8)	339(60.2)	563	
Health Facility	328(74.4)	113(25.6)	441	
Market/Business Premises	157(20.2)	622(79.8)	779	
School	246(47.2)	275(52.8)	521	
Time				
Afternoon	575(47.8)	627(52.2)	1202	<0.001
Evening	85(21.2)	316(78.8)	401	
Morning	778(52.0)	719(48.0)	1497	
Gender				
Female	575(43.5)	748(56.5)	1323	0.005
Male	863(48.6)	914(51.4)	1777	
Age group				
Adolescent	298(47.8)	326(52.2)	624	<0.001
Adult	914(47.4)	1013(52.6)	1927	
Children	24(20.5)	93(79.5)	117	
Elderly	202(46.8)	230(53.2)	432	

Table 5: Association between modes of facemask usage with demographic characteristics of study candidates

	Mode of facemask use		Total	p-value
	Correct use(%)	Not correct(%)		
	n = 517	n = 921		
Location				
Rural	128(38.1)	208(61.9)	336	0.350
Urban	389(35.3)	713(64.7)	1102	
Setting				
Bank	150(41.3)	213(58.7)	363	0.054
Church	42(35)	78(65)	120	
Commuter Park	77(34.4)	147(65.6)	224	
Health facility	124(37.8)	204(62.2)	328	
Market/Business Premises	44(20)	113(80)	157	
School	80(32.5)	166(67.5)	246	
Time				
Afternoon	197(34.3)	378(65.7)	575	0.463
Evening	34(40)	51(60)	85	
Morning	286(36.8)	492(63.2)	778	
Gender				
Female	195(33.9)	380(66.1)	575	0.188
Male	322(37.3)	541(62.7)	863	
Age group				
Adolescent	127(42.6)	171(57.4)	298	0.001
Adult	305(33.4)	609(66.6)	914	
Children	18(75)	6(25)	24	
Elderly	67(33.2)	135(66.8)	202	

Table 6: Association between the condition of face masks with demographic characteristics of study candidates

Variable	Condition of facemasks				Total	p-value
	Clean (%) n=499	Dirty (%) n=212	New (%) n=309	Worn out(%) n=418	n=1438	
Location						
Rural	103(30.7)	39(11.6)	65(19.3)	129(38.4)	336	<0.001
Urban	396(35.9)	173(15.7)	244(22.1)	289(26.2)	1102	
Setting						
Bank	117(32.2)	69(19.0)	83(31.7)	94(25.9)	363	<0.001
Church	41(34.2)	9(7.5)	38(31.7)	32(26.7)	120	
Commuter Park	75(33.5)	42(12.8)	37(16.5)	70(31.2)	224	
Health Facility	108(32.9)	42(12.8)	89(27.1)	89(27.1)	328	
Market/Business Premises	46(29.3)	19(12.1)	29(18.5)	63(40.1)	157	
School	112(45.5)	31(12.6)	33(13.4)	70(28.5)	246	
Time						
Afternoon	216(37.6)	80(13.9)	98(17.0)	181(31.5)	575	<0.001
Evening	14(16.5)	13(15.3)	24(28.2)	34(40.0)	85	
Morning	269(34.6)	119(15.3)	187(24.0)	203(26.1)	778	
Gender						
Female	209(36.3)	98(17.0)	129(22.4)	139(24.2)	575	0.006
Male	290(33.6)	114(13.2)	180(20.9)	279(32.3)	863	
Age group						
Adolescent	101(33.9)	29(9.7)	59(19.8)	109(36.6)	298	<0.001
Adult	333(36.4)	140(15.3)	206(22.5)	235(25.7)	914	
Children	3(12.5)	0(0)	15(62.5)	6(25)	24	
Elderly	62(30.7)	43(21.3)	29(14.4)	68(33.7)	202	