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Adherence to Face Mask and Social Distancing during Coronavirus 19 Pandemic. Sudan 2020-2021

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Abstract

Objectives: The Coronavirus disease 19 (COVID 19) pandemic affects 187 countries which is began in China in December 2019 and spread around the world very quickly, becoming one of the greatest threats to human life in this century. As a result, preventive measures such as wearing face mask and social distancing have been implemented to fight against spreading of the virus. This study aimed to assess adherence to face mask and social distancing during COVID19 pandemic.

Study design: Cross-sectional observational study.

Methods: This is a Cross-sectional observational study conducted at Khartoum state, the capital of Sudan. 1222 residents have been selected randomly to participate in this study. The inclusion criteria are: Everybody lives in Khartoum state is eligible to participate in this study. The exclusion criteria are: Everybody does not live in Khartoum state. The data was collected through structural questionnaire.

Results: The total of participants in this study was 1222. The majority of participants wear face mask only if it is necessary to enter a commercial store, governmental institution or a hospital (45.9%). The remaining portion of the participants wearing the mask only when they are with their family (11.9%) or with friends (11.1%) or at transport (16%) and at parties (6.5%). On the other hand, (8.4%) of the participants never wear a mask at all Table (4).The most of the participants practicing the social distancing only if it is needed to enter a commercial store, government institution or a hospital (41.5%), whereas the rest do it only when they are with their family (10.2%), with friends (6.2%), at parties (6.8%) and at transport (11%). Do not practice the social distancing at all (24.3%).

Conclusion: The most of the participants in this study have poor adherence to COVID19 preventive measures, especially wearing Face Mask and social distancing. They tend to follow these preventive measures only when imposed by an authority or it is necessary to enter certain places.

Keywords: Coronavirus 19; Face mask; Social distancing

Introduction

The Coronavirus disease 19 (COVID 19) pandemic affects 187 countries which were began in China in December 2019 and spread around the world very quickly. By May 8, 2020 the number of cases was 3,889,841 [1]. As what happened a century ago when the influenza pandemic had hit United States at 1918; at that time the masks of gauze and cheesecloth became the important preventive method against the virus which is similar to what is currently used to prevent the spread of COVID-19, the uses of masks also became mandatory in any indoor or outdoor activities [2].

The routes of transmission of COVID19 are related to any respiratory activities such as, coughing, talking and sneezing and it could be transmitted by direct contact; which are the most important routs of transmission, but there are another ways of transmission such as from mother to the fetus during pregnancy [3].

The patients are present with flu like symptoms such as cough, asthenia and fever as similar as other coronaviruses and severe lung injury [4]. There are high risk individuals to develop aggressive kind of the disease, such as immunosuppressed or elderly people, supposedly more at risk of complications from COVID19 and patients with Multiple Sclerosis [5].

Management

The management of COVID 19 including Intravenous Fluid, if there is suspicion for secondary infection you have to give the patient empiric antibiotics, Metered Dose Inhaler (MDI) used instead of nebulizers to prevent the aerosol spread, Non-steroidal anti-inflammatory agents not recommended by World Health Organization (WHO). The American College of Cardiology, Heart Failure Society of America's joint statement and American Heart Association recommend continuing of the Angiotensin Converted Enzyme Inhibitors ACE-I and Angiotensin Receptor blockers ARBs in patients with COVID-19 and now it's an area of discussion. Cardiomyopathy and cardiogenic shock which are the most serious complication of COVID19 infection so you have to monitor and treat it as soon as possible; you may use ultrasound which is useful in identifying patients with this complication. The last point at the management which it's not recommended at all situations are Corticosteroids; they are only required in presence of other indications such as chronic obstructed pulmonary disease or asthma exacerbations, evidence of cytokine storm and [6].

Prevention

The prevention is a most important method to stop spreading of COVID19. Early diagnosis and screening, isolation and treatment are very necessary to stop further spread. Washing hands and practicing the social distance are the most important measures in prevention of COVID19 [7].

Problem Statement

A lot of people died from COVID-19 specially who don't care about preventive methods such as wearing mask, practicing social distancing and washing hands.

Justification and Rationale

This study was conducted to know what are the reasons that make some people don't wear face mask and practice social distancing.

Objectives

The general objective of this study is to assessment of adherence to face mask and social distancing during coronavirus 19 pandemic. And the specific objectives are to assess when the people wearing mask or practicing the social distancing and to assess the causes of non-adherence to face mask and social distancing.

Methods

This is a Cross-sectional observational study conducted at Khartoum state, which is capital of Sudan country and contain the largest number of population of Sudan in compare to other states. It contains about 8,363,915 residents in the last census. 1222 residents have been selected randomly to participate in this study and the inclusion criteria are: Everybody live in Khartoum state is eligible to participate in this study. And exclusion criteria are: Everybody do not live in Khartoum state. Duration of the study from December 2020 to May 2021.

The data was collected through structural questionnaire which include personal data and the questions which measure the adherence to face mask and social distance. And the data was analyzed by SPSS application.

Results

The total of participants in this study were 1222, with slightly increased number of females' (50.1%) in compare to males (49.9%) (Table 1) and the most of the participants were 18-36 years old 69.7%, 215 of the participants were 18 years or less (17.6%). 10.6% were 37-64 years old and the age group (65 years or more) were only (2.0%) of the participants (Table 2). When it comes to educational level of the participants, (71.8%) were university level, (16.4%) secondary school level and only (5.6%) were primary school level. Master degree and PhD constituted (3.8%) and (2.3%) respectively (Table 3).

The majority of the participants wearing the mask only if it is necessary to enter a commercial store, governmental institution or a hospital (45.9%). The remaining portion of the participants wearing the mask only when they are with their family (11.9%) or with friends (11.1%) or at transport (16%) and at parties (6.5%). on the other hand, (8.4%) of the participants never wear a mask at all (Table 4). The most of the participants practicing the social distancing only if it is needed to enter a commercial store, government institution or a hospital (41.5%). whereas the rest do it only when they are with their family (10.2%), with friends (6.2%), at parties (6.8%) and at transport (11%). However, almost quarter of them do not do social distancing at all (24.3%) (Table 5).

Assessments of non-adherence to wear a face mask reasons

61% of the participants they don't wear the face mask because they do not like it, while (10.9%) because it's expensive and (10.4%) do not use it because of their illness. there were a minority of the participants (4.8%) believe that the mask is not important and does not prevent the disease. On the other hand, (12.8%) were for other reasons (can't hold it, affect their breath) (Table 6).

Assessment of non-adherence to practicing social distancing reasons

More than half of the participants (52.0%) were for other reasons

Table 1: Gender of participants.

Valid	Gender	Frequency	Percent	Valid percent	Cumulative percent
	Male	610	49.9	49.9	49.9
	Female	612	50.1	50.1	100
	Total	**1222**	**100**	**100**	

Table 2: Age of the participants.

Valid Age	Frequency	percent	Valid percent	Cumulative percent
18 years or less	215	17.6	17.6	17.6
19-36 years old	852	69.7	69.7	87.3
From 37 to 64 years old	130	10.6	10.6	98
From 65 to 82 years old	20	1.6	1.6	99.6
More than 82	5	0.4	0.4	100
Total	1222	100	100	

Table 3: Educational level.

Valid Educational level	frequency	percent	Valid percent	Cumulative percent
primary	69	5.6	5.6	5.6
secondary	201	16.4	16.4	22.1
university	877	71.8	71.8	93.9
master	47	3.8	3.8	97.7
PHD	8	2.3	2.3	2.3
Total	1222	100	100	

Table 4: This table assesses the adherence to face mask.

When do you often wear the face mask?					
valid		Frequency	Percent	Valid Percent	Cummulative Percent
	Just when it's necessary to enter a commercial store, government institution or hospital	561	45.9	45.9	45.9
	with family	146	11.9	11.9	57.9
	with friends	136	11.1	11.1	69
	At parties	80	6.5	6.5	75.5
	At transport	196	16	16	91.6
	Never wear the face at all	103	8.4	8.4	100
	Total	1222	100	100	

Table 5: This table assess the adherence to social.

When do you often do social distancing? (six feet distance between you and the other person)				
Valid	Frequency	Percent	Valid percent	Cumulative percent
	Just when necessary inside the commercial store , government institution or hospital	507	41.5	41.5
	with family	125	41.5	10.2
	with friends	76	6.2	6.2
	At parties	83	6.8	6.8
	At transport	134	11	11
	I don't do it at all	297	24.3	24.3
	Total	1222	100	100

Table 6: This table assess the non-adherence to face mask.

		Frequency	Percent	Valid percent	Cumulative percent
valid	Because of illness	127	10.4	10.4	10.4
	I don't like it	746	61	61	71.4
	Expensive	746	10.9	10.9	4.8
	It is not important and does not prevent disease	59	4.8	4.8	87.2
	Others (can't hold it, affect their breath)	157	12.8	12.8	100
	Total	1222	100	100	

Table 7: This table assess the non-adherence to social distance.

If you are doing social distancing please choose from the following					
valid	It is not important and does not prevent disease	Frequency	Percent	Valid percent	Cumulative percent
		129	10.6	10.6	10.6
	There is no COVID 19 at all	183	15	25.5	25.5
	Unfit for society	274	22.4	22.4	48
	other reasons (it's separate the society, cut the relationships	636	52	52	100
	Total	1222	100	100	

Table 8: This table asses the idea about social distance and face mask.

	Do you think wearing a mask and social distancing help prevent corona?				
		Frequency	percent	Valid percent	Cumulative percent
valid	No	140	11.5	11.5	11.5
	Yes	1082	88.5	88.5	100
	Total	1222	100	100	

(it's separate the society, cut the relationships). On the other hand, (22.4%) of the participants believe that it doesn't fit for the society, (10.6%) believe it's not important and does not prevent the disease and (15.0%) of the participants believe there is no COVID19 at all (Table 7).

88.5% of the participants were believed that combination of social distancing and wearing the mask prevent COVID19 transmission, however 11.5% believe it doesn't prevent the disease transmission (Table 8).

Discussion

The major objective of this study was to assess the adherence of Sudanese society to two of the most important preventive measures of COVID-19 spread. The most obvious finding from the analysis of the survey of 1222 participant suggests that they have poor adherence to preventive measures, especially wearing Face Mask and social distancing.

One interesting finding is that even though the majority of population believes that the combination of wearing face mask and social distancing prevents transmission of the virus, but the rate of adherence to such measures is low. Another important finding is that they do adhere to social distancing and wear face mask but only when imposed by an authority or it is necessary to enter certain places. This discrepancy could be attributed to the fact most of the participants of the study were of young age and the tendency of young

people to disobey rules, lack of adequate awareness and inadequacy of governmental regulations.

It's somewhat surprising that despite the fact that more than 75% of the participants have higher educational backgrounds (at least university degree), but the rate of non-adherence is high. In comparing to another study they found that non adherence to hygiene measures and social distancing is more among those of low and medium educational backgrounds compared to higher educational backgrounds. Additionally, most of them do not wear the mask because they don't like it, and do not do social distancing because they think separate the society [8].

Comparison of the findings with those of other studies confirms the findings that most of the participants are non-adherent to preventive measures. The majority wear face mask only if necessary to enter place or governmental institution (45.9%) and do social distancing only when necessary to enter a place or governmental institution (41.5%). This finding is consistent with another study that found only (18%) of pregnant women wore a face mask and only (22%) practiced social distancing [9]. Furthermore, we found that (15%) of participants does not believe in the existence of Coronavirus at all, and this finding is consistent with the previous study who found that (3.8%) of asthmatic patients does not believe in the existence of coronavirus compared to (3.4)% of general population [10]

However, the outcome we found is contrary to two previous studies. Firstly, who found a high level of adherence to face mask wearing (96.4%) and relatively lower adherence to practicing social distancing (42.3%) [11]. Secondly, that who found high level of adherence to preventive measure (social distancing non-compliance range from (3%-18%) This observed increase in level of adherence could be explained by possible high level of awareness and strong health authorities' regulations and campaigns [8].

Conclusion

The majority of participants in this study have poor adherence to COVID19 preventive measures, especially wearing Face Mask and social distancing. Furthermore, most of the participants tend to follow these preventive measures only when imposed by an authority or it is necessary to enter certain places. Regarding the causes behind non-adherence of participants to these measures, more than half of people

simply don't like face mask. The majority also tend to ignore social distancing for unidentified reasons.

Ethical Consideration

Oral consent has been taken from all participants of this study. The ethical approval has been taken from Alzaiem Alazhari University.

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