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ORIGINAL ARTICLE

Use of Face Mask as Visual Reminder of the Virus: Covid-19 and Frustration

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ABSTRACT

Objective: Infection with COVID-19 is spreading as a droplet infection through the respiratory droplets of an infected person. Wearing a facemask, in addition to practicing social distancing and good hand hygiene, can help prevent the infection. The study determined the effect of fear of infection on the use of face masks and use of face mask to the frustration and to analyze the mediating effect of use of face masks between fear of infection and frustration.

Methodology: Time horizon wise the study is cross-sectional where data collected first-hand for the research by adopting a convenience non-random sampling technique, where data collected by conducting a web-based survey consisting of the general public from Hyderabad city in November 2020. Using Smart PLS 3.0 software the significance and relevance of path coefficients testing performed the partial least square (PLS-SEM) approach.

Results: Mean age of the individuals was 35.12+23.44 years and females were in majority 59.8%. The outer loadings and Composite Reliability (CR) are greater than 0.50 and 0.70 respectively ascertaining indicator reliability and internal consistency reliability. Convergent validity is maintained as AVE are above 0.5, indicated that discriminant validity is maintained as HTMT values are less than 0.85. Fear of infection is positively associated to use of facemask and use of facemask is positively associated with frustration and use of facemask has an indirect relationship with fear of infection and frustration.

Conclusion: It was concluded that the effect of fear of infection from coronavirus will increase the use of facemask. It also analyzed the annoyance caused by wearing a face mask and has highlighted the mediational effect of face mask use between the fear of infection and frustration.

Keywords: Fear of infection, Use of face mask, Frustration, COVID-19

INTRODUCTION

The Covid 19 pandemic have alarmed the world leading to massive panic situations in more than 200 countries. COVID-19 spreads through the respiratory droplets of an infected person when they breathe, cough, sneeze, or even talk. The most alarming prediction is the high probability that COVID-19 can become a source of persistent infection if the lesson is not learned. Therefore, use of a face mask is one of the essential means to prevent the transmission of coronavirus [2]. Nevertheless, wearing face mask also comes with annoyance and these problems can be bothersome, most countries and the World health organization propagated the use of face masks as a key intervention. Though the acceptance of such masks is increasing, but it is causing frustration in people[3]. People experience discomfort such as ear pain and skin sensitivity, headaches, dyspnea, foggy glasses, skin eruptions and many more reasons, ultimately reducing the use of masks on the expense of fear of being infection and increasing the chances of spreading corona virus[4]. The study explored since WHO declared COVID-19 pandemic, and media continually outbreaks increased awareness and tended people to adopt immediate precautionary measures leading to an increased practice of wearing the medical masks and coverings. The study indicated a positive relationship between the fear of infection and use of face mask. It further explored old aged or low immune people being more concern about precautionary measures[5]. The contagiousness nature of this viral infection leads to increased stress and alteration of individual behavior.[6] There is an increase in fear due to the risk of being infected without known curative medication, the increase safety habits, washing hands, use of appropriate sanitizers, use of mask, social distancing increases, excessive use of disinfectant etc.[7,8] There is a positive link between threats of contamination with safe practices.[9] This feeling of infection triggers avoidance behavior and attempts to remove potential sources of contamination with hyper-vigilant personality and self-avoidance behavior restricting their lives, ultimately increasing depression, anxiety and frustration. The level of mental illness or depression increases at the moment when the virus grows and infects so many people, for instance[10] posed due feeling anxiousness in case of H1N1 influenza (swine flu) where this virus can survive on surfaces like telephones and tabletops so it makes people alert and compelling them using extra safety measures to protect themselves and their family members and putting them in a significant mental trauma. The fear of a COVID-19 pandemic has made the people habitual of using facemask all over the world. Facemask use makes people aware of a set of ethically relevant distinctions and can occasionally drive them to make decisions. The constant broadcasting by the Chinese media during the pandemic motivated the majority of people to adopt wearing a mask [11]. Another study [12] indicated the governmental policies for enforcing common people or communities to use face masks and other preventive measures by reasonable controls through robust checks, scheduling state reopening timings and social distancing. This study highlights the positive effects of protective strategies for the reduction of infection. It indicated the governmental influence and public awareness increased frequent use of facemask use by the general public in Washington and New York State, for restraining the spread of the COVID-19 pandemic.) Such as[13] explored besides adopting precautionary measures, the increase in death toll rate at their highest continue the number of affected people and increase in the number of admissions in hospitals due to COVID-19, cost burden, people differences, or tendencies in using mask (rarely or frequently, with symptom or without symptom, properly sterilize well standard or cloth made mask, COVID -19-Positive patient mask adoption indicates people's behavior toward use of mask. Although up to some extent frequent increase in number of deaths or Corona positive cases make them assume mask or other precautionary measures as an ineffective resistant for contamination increases excessive depression and frustration since no vaccine still introduced. Use of a mask is essential for both preventing illness in healthy persons and preventing symptomless transmission. Preventive vaccination is on the way but not globally tested not available for general public use. With the unavailability of a specific antiviral or vaccine, non-pharmaceutical interventions need to be used in order to limit the spread of infection and this is a global practiced phenomenon. Nevertheless, widely non-compliance with these non-pharmaceutical interventions such as wearing a mask, keeping social distance and hand washing is the obvious cause of a second wave of COVID-19

in Pakistan. The government announced a second spell of COVID-19 in Pakistan on October 28, 2020, when a daily increase in cases reached 750 compared to 400 to 500 weeklies leading to a sudden increase in active cases and hospital admissions with critical cases across the country.

MATERIAL AND METHODS

The current cross-sectional research was conducted out together with the data gathered online in the year end 2020 month of November using a web-based survey from the public within Hyderabad city, Sindh by employing convenience non-random sampling technique. The current study the strictly considered the ethical standards while executing measures in studies including human respondents. The facemask use instrument (UFM) of Ho (14) was adopted that comprises six items on a five- point scale indicating the frequency of face mask use practice. The seven-item instrument of fear of infection" (FOI) adapted from the work of indicating the fear of infection from coronavirus.[15] The three-item instrument of frustration (FRS) was adapted from indicating the level of frustration for wearing a mask. In this study for analysis the Partial least square (PLS-SEM) approach was employed. A software SMART PLS 3.0 used for testing the significance and relevance of path coefficients [17].

RESULTS

The demographic data of the respondents are indicated as the mean age of the individuals was 35.12+23.44 years. Females were in majority 196 (59.8%) and males were 132 (40.2%). Most of the cases were employed, students and house wives. Table-1

The table-2 specified, the outer loadings and Composite Reliability (CR) are greater than 0.50 and 0.70 respectively ascertaining indicator reliability and internal consistency reliability.[18,19] Convergent validity is maintained as AVE are above 0.5.[19]

Table -3 indicated that discriminant validity is maintained as HTMT values are less than 0.85.[17]

Table- 4 identified that fear of infection is positively associated to use of facemask and use of facemask is positively associated with frustration and use of facemask has an indirect relationship with fear of infection and frustration. as P-value is less than 0.05 and CI not overlapping zero[18, 20]

Table 1: Socio-demographic characteristics of respondents n=328

Variables		Statistics
Age (years)		35.12+23.44
Gender	Male	132 (40.2%)
	Female	196 (59.8%)
	Total	328(100%)
Educational status	Student	118 (35.9%)
	Employed	152(46.3%)
	Self-employed/business	28(8.7%)
	House wife	30(9.1%)
	Total	328 (100%)

Table 2: Outer loading, CR and AVE n=328

CONSTRUCT	ITEMS	OUTER LOADINGS	CR	AVE
Use of face mask (UFM)	UFM1	0.967	0.955	0.782
	UFM2	0.745		
	UFM3	0.893		
	UFM4	0.860		
	UFM5	0.896		
	UFM6	0.927		
Fear of Infection (FOI)	FOI1	0.745	0.889	0.572
	FOI2	0.752		
	FOI3	0.662		
	FOI4	0.787		
	FOI5	0.750		
	FOI6	0.830		
Frustration (FRS)	FRS1	0.870	0.882	0.715
	FRS2	0.720		
	FRS3	0.933		

Table 3: Discriminant validity

	1	2	3
Use of face mask			
Fear of Infection	0.663		
Frustration	0.576	0.492	

Table 4: Significance and relevance of path coefficients n=328

	Original Sample	(STDEV)	|O/STDEV|	P Values	5.00%	95.00%
Fear of Infection→use of face mask	0.687	0.044	7.525	0.000	0.487	0.563
Use of face mask → frustration	0.552	0.032	4.731	0.000	0.443	0.837
Fear of infection→ use of face mask →frustration	0.469	0.041	4.576	0.000	0.321	0.512

DISCUSSION

Purpose of the study was to know how fear of infection can induce frustration during COVID 19 pandemic. The results supported the first hypothesis that fear of infection was positively related to the use of face mask. This finding is augmented by the literature that suggests that since WHO declared COVID-19 pandemic the governmental bodies have forced people to take precautionary measures to cope with a difficult situation.[5] Not only Pakistan but the whole world has ensured to take proactive, comprehensive and coordinated plan to deal with this pandemic.[21] Since this viral illness can spread from an infected person's mouth or nose in small liquid particles when they cough, sneeze, speak, sing, or breathe heavily; the resultant fear among common people makes them ready to adopt precautionary measures such as masks as a simple barrier for prevention.[7]

The current study has revealed a positive association between the use of face masks and frustration among common people. Other studies indicated that the fear of infection with deep concern on using safety measures can lead to phobias of being contaminated and uneasiness due to the constant use of masks and other protective measures.[22] Another study related to infectious disease[23] as reported that highlighted at the time of serious infections like Ebola, to stop the virus from spreading, treatment facilities and isolation zones were set up, gloves, gowns and face masks were used. Frequent dissemination of information related to diseases led to an increase in safety practices, but on the other hand the general distress, frustration, and uneasiness keep on rising too. The use of face mask indicate as a visual reminder of the virus as people have contamination fear, the continues consciousness regarding following of safety measures including social distancing, the frequency of washing and cleaning with having massive provision of costly disinfectants or availability and use facemask for inestimable time, thus have greater negative effect of mental wellbeing and thus increases general distress, frustration or uneasiness among common people.[9,10] The study established as meditational relationship based on existing research such as since WHO declared COVID-19 pandemic, and media reported it ultimately lead to fear of infection and make people use extensively of face mask either force fully or willing fully the increase in safety practices beside health concern reflected the general distress, frustration or uneasiness by common people. The frustration gradually increases since no vaccine is still in practice and there is incalculable time for that they must continue to exercise all precautionary measures including wearing face mask.[22] Studies evident indicate though it is contagious disease so face mask can reduce the chances of infection while this face mask also reflected as visual reminders of the virus all the time and simultaneously increase uneasiness,

frustration, and anxiety.[6] Thus, it can be predicted that fear tempts people to use masks that increase the level of frustration. The current study has several limitations first it is difficult to gauge perfect views of respondents. As the discernment is the personal representation, which is covered up as the inside view or perspective of the respondent, this could be discovered just via the reactions endeavored or response attempted by participants in the crucial epidemic circumstance. Additionally, all respondents could use or internet access women were over-represented in the sample and a significant difference in demographic characteristics across genders observed. Further, this study included a certain geographical region covering only one city of province of Sindh, which is another limitation that might reflect bias. As a result, these findings may not be applicable across the country. This study, on the other hand, provides useful information for additional research into the knowledge gap around the face masks uses and its consequences. Future research should encompass all provinces and look at the factors that contribute to the knowledge gap. Second, it should concentrate on ways to improve mask adoption and reduce discomfort perceptions, while always concentrating on the overall goal of managing and preventing COVID-19. More study is needed to provide light on successful public health programs (especially health education programs) that can increase mask use and compliance, as well as the physiological and psychological effects of these programs.

Furthermore, the research can be widened with more moderating variables or mediating variables, or both along with other variables like tiredness, mental fatigue, depressive disorder, anger, anxiety, mental disorder, Burnout, Cynicism etc.

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CONCLUSION

During coronavirus epidemic 2019 (COVID-19) pandemic, most governments and health organizations, such as the WHO, have recommended that people wear facial masks by early 2020 as a crucial method for preventing the spread of the severe acute respiratory syndrome 2 coronavirus. Although the acceptance of such masks is increasing it is causing frustration in common people and thus efforts are needed to help people remove the psychological and physical problems by devoted counseling. For instance, at the community level; appeal to the concern for others and be a role model and life saver for the beloved. Forcing longer durations for wearing a mask also increases the frustration that can be handled through mask off or mask down with appropriate health measures.

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