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PREVALENCE, INTENSITY AND MANIFESTATION OF COVID-19 FEAR: A CROSS SECTIONAL ANALYSIS

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SUMMARY

Background: *Pandemics are direct antecedent of distinctive physical, psychological, social and financial impacts. A large number of researches are being conducted regarding previous epidemics and pandemics and lot more is currently in progress vis-à-vis COVID-19. The current research is an attempt to explore psychological impacts of COVID-19 specifically to find out the existence, intensity and dynamics of COVID-19 fear in non-clinical educated population.*

Subjects and methods: *A cross sectional online study was conducted with non-clinical educated Pakistani citizens. Self-structured questionnaire comprising close and open ended questions was used for data collection from different cities of Pakistan. N=317 participants (men=121, women=196) were the sample for this study. Demographic information was also sought. The age range of sample was 18 to 50+ years. Most of the participants fall in the category of age group 23-28 of sample. All the participants were educated from Intermediate till PhD but majority of participants had 16 years of education. SPSS 22 was used for quantitative data analysis. Qualitative data were analyzed using thematic analysis and content analysis.*

Results: *Results yield significant age wise and profession wise difference in existence of COVID fear. Nine major themes were extracted regarding nature of fear i.e. Corona Fear, Loss, fear of isolation or quarantine, religion related fear, death, consequences of COVID-19, Under developed country, Psychological component of fear and empathy. Those who denied fear were asked the reasons and six major themes were extracted here i.e Religion, Inevitability of death, Precautions, Belief in self, Myths or misinterpretation of disease and Avoidant approach.*

Conclusions: *Age and profession significantly influenced fear of COVID-19. Gender-wise exploration of themes yields interesting insights. Participants reflected positivity and empathy in crisis situation.*

Key words: *COVID-19 – dynamics – fear – manifestation - empathy*

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INTRODUCTION

Since the inception of novel coronavirus in Wuhan (first reported in December 2019 from China) the pace of life changed altogether across the globe and it tilted on 180 degree after it spread worldwide and WHO declared it pandemic on March 11, 2020 (World Health Organization 2020). Being a new phenomenon with ever increasing number of victims and causalities worldwide and because of its being the front page stories and headlines of print and broadcast media the disease started creating panic, stress and anxiety (Shuja et al. 2020) in caregivers, victims and even in non-victims and it was expected to create more patients with psychological disorders especially anxiety disorder (Lazzari et al. 2020) and the most unfortunate fact of the pandemic remained the blame game (Jakovljevic et al. 2020) and racism (Anjum et al. 2020) which even exacerbated the physical and psychological trauma. As the disease spreads with human interaction so in order to prevent the disease human interaction was minimized by shutting down educational institutes, businesses and gatherings. Forced or voluntarily quarantine and isolation were also stressed much which result in a hype of fear, stress and anxiety (Ahorsu et al. 2020). It is often reported that victims of epidemic or pandemic face stigmatization, social exclusion or even depression and adjustment problems but uninfected may face fear of getting infected and it may also cause irrational and unclear thoughts (Lin 2020). This situation made scientist and researchers from all over the world to explore impact, prevention and cure for the disorder but more focus is on physical health; though psychological impact of pandemic is not negated fully (Xiang 2020) but there are a limited number of studies in this regard (Satici et al. 2020). In Pakistan after the phenomenon got intense many educational and medical institutes started online help and counseling services and research on psychological aspects of COVID-19 also started but most of the research related to psychological health is either review articles (Rana et al. 2020, Hashmi & Saleem 2020) or studies conducted on health workers (Waris et al. 2020, Mukhtar 2020). Primary research with general public is scarce and very limited studies are encompassing fear factor. In this context the objective of this research was to explore extent and nature of fear in general public who are not victims of disease. Although researchers developed a scale to measure fear of COVID-19 in Iranian population (Ahorsu et al. 2020) and researchers in Turkey validated it in their population (Satici et al. 2020) but purpose of current research was beyond this. The study aimed to explore the fear in depth regarding its manifestation gender wise and to also compare the participants on fear on the basis of diverse demographic information. Previous literature supports the phenomenon of fear in crisis situation and describes gender as predictor of fear (McLean & Anderson 2009) whereas age also has significant influence on fear (Thorson & Powell 2000, Russac et al. 2007). This leads to formulate the hypotheses of current study. Women would outscore men in fear and that people in their 20s would be more fearful as compared to other groups.

SUBJECTS AND METHODS

The research was conducted according to the principles of the Declaration of Helsinki. The data was collected in the month of April 2020 after almost 1 month of first case of COVID-19 reported in Pakistan on 27th February, 2020. A pilot-validated self-reported questionnaire was administered, along with a request for demographic characteristics. Through online data collection a sample of N=317 participants were collected from all over Pakistan. Informed consent was taken and only those participants were included who had access to internet and knew English language. Further the healthy participants were included who were not a victim of COVID-19. The data comprised 121 men and 196 women, with an age range of 18 to 50+ years. Most of the participants fall in the category of age group 23-28 (40.10%) of sample. All the participants were educated from Intermediate till PhD but majority of participants had 16 years of education (51.10%) and most were either student or professional. 10 % of sample comprised housewives whereas 1.6% participants were unemployed. So far as marital status is concerned 120 (37.90%) were married and 195 (61.50%) were unmarried and just 10% belong to rural area rest were from Urban and metropolitan areas. Self-constructed electronic questionnaire comprising demographic information, closed and 8 open ended questions was used for data collection. Both Quantitative and Qualitative methods were used to analyze the results. t-test and one way ANOVA were computed by using SPSS version-22 for Quantitative results whereas qualitative data was analyzed though qualitative content analysis.

RESULTS

In an attempt to explore the fear of COVID-19 out of 121 men 49 (40.49 %) reported least to moderate fear whereas 70 women (35.71 %) reported less to moderate fear. 72 (59.50%) men reported higher levels of fear whereas 124 (63.26 %) women reported higher level of Corona fear. The following bar graph reflects the comparison of fear among men and women. The SE error bars reflect that among low fear there is no significant difference among men and women. But in high fear women are superseding males (Figure 1).

One way ANOVA results indicated significant effect of Age $F(6, 316)$ 2.98, $p<0.008$. Further Post hoc analysis revealed that age group 23-28 (M=5.43, SD=2.77)

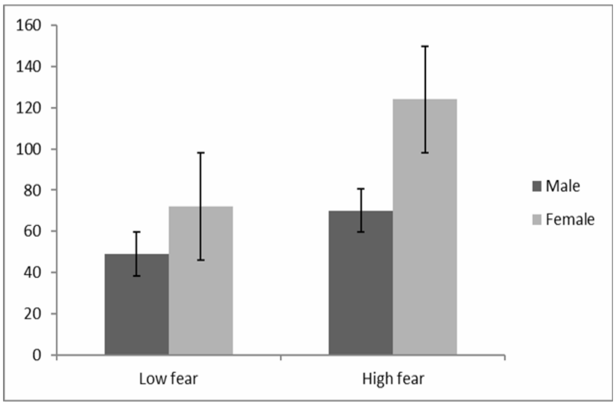

Figure 1. Comparison of fear Gender wise

scored significantly higher on fear as compared to age group 34-38 (M=3.60, SD=2.73).Profession also indicated significant effect on level of fear $F(9, 316)$ 2.63, $p<0.006$. Post hoc analysis revealed that housewives scored significantly higher (M=5.91, SD=2.98) on level of fear as compared to self-employed individuals (M=3.16, SD=2.41).

For further detailed exploration of fear the participants who reported high levels of fear were asked to describe the Nature of their fear in terms of what actually make them fearful and the following themes appeared (Table 1).

The above table indicated 9 major themes which were extracted from responses of participants and then the themes were analyzed in terms of gender.

The first theme was labelled as ‘Corona fear’. In all its subthemes women scored higher frequency as compared to men except in ‘burden of care’ and ‘spreading the disease to loved ones’ secured a tie of frequencies. The participants were afraid that they might become a victim of corona and then no cure will make the situation worsen. They were also afraid that they might spread it to their loved ones as well. The men were worried about burden of care which is very relevant to their gender role; in our society taking care of sick is responsibility of women usually.

The second theme was about fear of losing loved ones and losing jobs which was very pertinent regarding current situation where economic crisis is severe along with human crisis.

‘Fear of isolation’ was more among women because they do not want to be apart from family and they were also afraid that it might not last forever. This fear gets a validation from subtheme of timelessness of disease in major theme 1 where women outscored men.

The participants were also having fears related to life after death and being presented in front of Allah with their sins.

‘Death’ was next major theme which depicted participants’ fear not only about their own death but also the death of others as well. Some of them were afraid to leave the world before achieving their aims. It’s very natural because death is most deniable reality of our life and hardly anyone wants to die.

Participants were also afraid about the possible consequences of COVID-19 in terms of lock down and its effects on future life. They were also horrified because they were not satisfied with health and care facilities available in under developing country like Pakistan. They were also worried about hoarding mafia and lawlessness.

Interestingly very few participants narrated the psychological consequences of fear. Just 12 out of 317 participants mentioned psychological consequences in terms of stress, anxiety and depression.

The existence of empathy and sympathy among participants for others was very positive approach.

An interesting finding was that analysis of themes reflects that participants share their fears according to their society assigned gender roles. So the men were worried for taking care of family and loss of job or about economic conditions because providing finances is duty of head of family. Whereas women were worried more about losing loved ones or being separated from family etc because nurturance is their role.

Further a number of people said that they are not afraid of COVID-19 and they were asked to describe why they are not afraid or which things kept them strong against fear and the reasons they highlighted are as follows (Table 2).

Table 1. Thematic analysis depicting nature of fear

	Major Theme	Sub-Themes	Male Frequency	Female Frequency
1	Corona Fear	Fear of disease itself	7	20
		No cure	6	5
		Fear of getting sick	3	1
		Spreading the disease to dear ones	7	7
		Contagiousness	3	8
		Timelessness of disease	0	9
		Rapid spread of disease	1	1
		Burden of family care in case of disease	4	1
2	Loss	Losing lives/ Losing loved ones	12	40
		Loss of Job/ Economic condition	14	1
3	Fear of Isolation/ Quarantine	Have to live alone; away from family if I got disease	4	19
		Staying at home forever	0	4
4	Religion related fear	Life after death	1	4
		Fear of Allah	5	9
		Sin	0	2
5	Death	Afraid of dying	10	30
		Death of others	5	3
		Die before achieving goals	2	
		Horrible death (no funeral or other rituals)	1	7
6	Consequences of COVID-19	Lock down	5	3
		Postponing plans	1	1
		Future	3	3
7	Underdeveloped country	Lack of facilities	7	3
		People not taking it serious	2	3
		Unavailability of medicines	1	
		Mafia groups (hoarding)	1	
		Increased crime rate	1	
8	Psychological Consequences	Helplessness	2	1
		Uncertainty	1	1
		Fear of failure	1	1
		Anxiety of increased death rate		1
		Stress/depression	1	1
		Dependence on males		1
		Being inactive		1
9	Empathy	Poor people are suffering more	4	2
		Worldwide spread of disease	1	

Table 2. Thematic analysis depicting reasons which buffered participants against fear

	Major Reasons	Sub-Reasons of not feeling afraid	Male Frequency	Female Frequency
1	Religion	Faith in Allah	22	33
		Allah is with me	3	
		Believe in Allah that it will over	1	4
		Everything is in Allah's hands	1	9
		Allah will help me		1
		Pray		2
		Martyrs don't die	1	
2	Inevitability of death	What has to happen will happen	3	2
		Everyone has to die one day	6	16
		Have to face it	1	
3	Precautions	I took precautions and stay at home	21	19
4	Believe in self	I have strong immunity to fight the disease	3	5
		Being accompanied by loved ones		1
		Life must go on		1
5	Myths or misinterpretations about disease	I am not afraid because I am young	2	1
		I'll not suffer because I am educated	1	
		It will end soon	2	1
		Low death rate		1
		Not in my residential area	2	1
		It's curable/ recoverable	1	2
6	Avoidant approach	Because I don't watch news		1

The above table indicated 6 major themes which help participants against feeling afraid.

The first major theme was 'Religion'. The most reported reason was the power of faith. The highest frequency of among reasons was 'faith in Allah'. Both men and women participants were of the opinion that they have faith in Allah that He will save them from this disease and the disease will get passed. They also believe that everything is in Allah's hand and with prays and help from Allah they will be safe.

Second theme was 'inevitability of death'. Participants believe that there is a fixed time for dying so one should have courage to face it.

Participants were of the opinion that 'precautions' can save them from getting sick and more men have this perception. On the other hand 'belief in one self' was the reason that gave them strength. The participants were of the opinion that having strong immunity, social support especially from loved ones can help stay healthy and strong.

There also appeared some myths about the disease and participants seem to believe that because of being young and educated they will not get a victim. Moreover the perception that the 'disease is recoverable' or 'death rate is low in our country' etc were also the reasons of not being afraid. Interestingly these myths prevailed in both the genders.

Lastly one of the participants feels herself unfearful because she avoids watching news and remains ignorant.

DISCUSSION

Research indicates that gender significantly influences fear and women substantially report higher fear as compared to males which likely to turn into anxiety disorders (McLean & Anderson 2009) later on same was true in our study and women reported higher levels of fear as compared to men. So far as the age wise differences in fear are concerned a study indicated that fear of death is higher among younger adults and middle aged as compared to older people (Thorson & Powell 2000), same is true for our participants with age range 23-28 (which includes early adulthood or young adulthood as described by developmental psychologists) reported higher fear of COVID-19. Another research suggested that during 20s people are more afraid of fear which subsides with passing age (Russac et al. 2007).

An interesting finding of our study was significance difference of fear among housewives which probably attributes to their gender (female having higher level of fears, Thorson & Powell 2000) and secondly it can be attributed to their being care taker of family.

In qualitative analysis the most promising finding was women outnumbering men on fear of COVID-19. Secondly fear of spreading the disease and contagiousness of disease was reported repeatedly. It is also in line with a study where health care workers were highly anxious about transmitting the disease to family members rather than getting infected (Temsah et al. 2020). Women participants also appeared to be in fear of losing the loved ones whereas men were more concerned about loss of job as compared to loss of loved ones. It endorses the existence of gender specific roles of a patriarchal society where a woman is more on nurturing side whereas earning is a men domain mainly (Dako-Gyeke 2013). The fear of quarantine or isolation was also a manifestation of fear of being unable to care the family and not able to perform assigned gender role truly. So the women mentioned that they are worried that if they get sick they have to live away from their children or how they will take care of elderly etc whereas as men were worried that they have to take care of a sick person which seems burden to them. Participants also indicated the fear of death. Interestingly the fear of death was manifold ranging from own death to others' death or dying before achieving anything to life after death. Moreover, participants were also afraid that if they die of COVID-19 their death rituals would not be performed properly. This all is more a manifestation of religion, culture and ethnicity. Studies indicate that fear of death and death anxiety and attitudes about death are shaped by religion and culture (Hallberg 2004).

Another major concern of participants was about being in an underdeveloped country. They believe that health system in Pakistan is not strong and reliable enough, people are not responsible and mafia groups would further deteriorate the situation. Other researchers also highlighted the same issues and showed their concerns about unsatisfactory scenario of current situation in Pakistan (Waris et al. 2020). And that the non-serious attitude of people and their apathetic approach will enhance problems for country and people (Javed et al. 2020).

Among the participants few reported that they were not afraid of COVID-19 and when asked the reason of their fearfulness, the most reported reason was the strength provided to them by their religion. Research continuously supports that religious involvement is associated with better physical and mental health and work as a support system for individuals (George et al. 2002).

Another reason was the logical approach that death is inevitable and has to happen one day. Some believe in themselves and the precautions they take which is an indication in health belief model that greater perceived threat has modified the participants' behaviors and minimized their anxiety and stress (Mukhtar 2020).

Some of the participants feel safe because of their myths about disease or because they want to stay ignorant in order to avoid fear or anxiety. The present study has some limitations. First, the study has limited generalizability for clinical population or victims of COVID-19 as it was conducted with non-victims. Second, the data was collected on self-report based questionnaire which might has the risk of source bias.

CONCLUSION

The study illustrated the manifestation of fear with regards to different demographic variables and further explained the in depth nature of fears. The study can be useful for mental health experts to focus non-victims, general public and care takers regarding their fears and problems of COVID-19 because their mental health is equally important like health workers and victims. In our study people did not report other anxiety disorders (just 11 people mentioned stress, anxiety, OCD or depression) though researchers apprehend it to be higher (Lazzari et al. 2020). Further large scales studies can probe the relationship of COVID-19 fear with other anxiety disorders and stigma. Prevention programs can be designed to help general population overcome the fear based on gender and age as it is important (Pakpour & Griffiths 2020). Despite its limitations, the findings of this study will help mental health professionals to deal with the mental health problems of general public generated by COVID-19.

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