

Fear of COVID-19, Obsessive Compulsive Symptoms and Psychological Well-being: Moderating Role of Harm Avoidance Behaviors among Adults in Lahore, Pakistan

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The objective of the study was to investigate the relationship of fear of COVID-19 obsessive-compulsive symptoms, harm avoidance, and psychological well-being among adults, during the pandemic. The study hypothesized that there is a positive association of fear of COVID-19 with obsessive-compulsive symptoms, and a negative association with psychological well-being among adults. Further, harm avoidance is likely to moderate the relationship between fear of COVID-19 with obsessive-compulsive symptoms and the psychological well-being. A correlation research design and non-purposive sampling technique were used to select the sample of men between the age range of 28 and 31 years (N=75, 49.3%) and women between the age range of 32 and 35 years (N=74, 50.7%) were recruited via an online survey. Pearson Product Moment Correlation Analysis showed a significant positive relationship between fear of COVID-19 and obsessive-compulsive symptoms. A non-significant negative relationship emerged between fear of COVID-19 and psychological well-being. Moderation analysis was run through PROCESS and the findings indicated that harm avoidance behaviors partially moderate the relationship between fear of COVID-19 and psychological well-being. It is recommended that fear of negative events be considered as a target variable for devising interventions for mental health and well-being in both stressful situations and in clinical practice.

Keywords: Fear of COVID-19; coronavirus; obsessions; reassurance-seeking behavior; pandemic

A widespread occurrence of any infectious disease which develops in a worldwide emergency, is generally declared as a pandemic. The enduring nature of the pandemic prolongs adverse economic effects. It is not only associated with the fear of acquiring the disease, but also emotional, behavioral, and psychological problems such as fear, anxiety, and depression (Khademi, 2020). Post-traumatic disorders range from 4 to 41%, and depression is reported at 7% during outbreaks leading to disruption of mental health (Mowbray, 2020). In 2009 the swine flu pandemic was the most widespread outbreak in Mexico and in 2013, an epidemic of Ebola virus disease hit Western Africa with a world wide spread this increased the rate of deaths which in turn had psychosocial effects on the population, especially adults. These results of the studies show that past pandemics have caused poor psycho-social impact for a long period across all age groups, even after the pandemic ended (Shultz et al., 2016).

In 2019, a severe and acute respiratory infection had a wide spread, and several cases were reported in Wuhan, China (She, 2020). A new virus “Coronavirus”, which generated a pandemic emergency globally, caused this contagious disease. Shah et al. (2022) define fear as a feeling of anxiety pertinent to occurrence of anything undesirable or appraising the risk of something deleterious to health. Fear of COVID-19 (FCV19) was specifically associated with chief indications among adults being worried about the coronavirus (Lee et al., 2020). The media has also played its role in frequently citing headlines which provoke FCV19 among individuals that in turn make them to fluctuate between phobia and denial (Oaten, et al., 2011). In a pandemic situation, the development of fear is a common issue and this is further associated with the emergence of mental health issues and generally impact one’s psychological wellbeing. The clinicians and researchers have also highlighted their concern regarding the possible deleterious outcomes of FCV19 (such as isolation and loneliness, misery of death of closed ones, health issues, job loss and financial instability, as well

as socioeconomic failure). Furthermore, the fear associated with it had immense impact on the mental health and psychological wellbeing of all the individuals residing in the South Asia.

Not surprisingly, researchers have found a significant relationship between Fear of COVID-FCV19 and Obsessive-Compulsive Symptoms (OCS). Literature presents mixed findings in this regard. In some individuals, it may lead to an increase in OCS symptoms such as increase in contamination obsession and washing compulsions, whereas in some individuals, no substantial worsening of symptoms was observed (Storch, et al., 2020). Pacitti, et al. (2021) explored obsessive-compulsive symptoms in Italian participants through an online web-based survey completed on 20241 individuals. The results revealed high rates of OCS during COVID-19. In addition, OCS was associated with hopelessness, apprehension, superficial trauma symptoms, sleeplessness, and diverse COVID-19 associated worrying events. Berman et al., (2022) findings also contribute to the literature demonstrating a significant relationship between COVID-19 impact and OC severity. Jelinek, et al. (2021) studied the prognostic orientation of obsessive-compulsive symptoms during the coronavirus of 2019 in German resident's subsample (n = 519). The results support a minor rise in obsessive-compulsive symptoms during COVID-19. For an inauspicious progress, experience avoidance is associated to symbolize a significant predictor. Ji et al. (2020) also highlighted the relationship between fear of COVID-19 and Y-BOCS Score. It is concluded that the fear of negative events play a significant role in the development and exacerbation of OCS.

While considering the association between FCV19 and OCS, it is of utmost importance to examine the role of harm avoidance behaviors. The common theme of obsessions and compulsions revolves around the fear of being contaminated, as well as, fear of harm coming to self or others. Harm avoidance is a personality trait which disposes individuals to worry in anticipation, to fear uncertainty and to deliberately avoid confronting it (Hayes et al., 1996). These behaviors are related to anxiety.

The previous literature documents psychological well-being as key concern during the outbreak of any pandemic. Studies carried out across various contexts also pinpoint that the Fear of COVID-19 (FCV19) influences several aspects of psychological well-being such as (connecting with others, healthy relationships, personal growth, autonomy and life satisfaction) (Garfin et al., 2020; Pakpour & Griffiths, 2020). The FCV19 and its strong association with Obsessive Compulsive Symptoms is also well established. Nevertheless, its influence on psychological well-being and the moderating role of harm avoidance hasn't been explored much, especially in Pakistani context.

Clinicians and researchers have attempted to comprehend the reality of this epidemic situation, however empirical data which focuses on psychological well-being and its predicting and moderating factors is limited. Hence, it's the need of the time to investigate it's scope as well as geneses. To fill this gap, the researcher endeavors to analyze the relationship of fear of getting infected and Obsessive-Compulsive symptoms with psychological well-being. In addition, harm avoidance is used as a moderator between FCV19, Obsessive Compulsive symptoms and psychological well-being.

This research contributes toward relevant literature and it has manifold implications. First of all, this study was conducted during the peak time of COVID-19 (first wave), when strict lockdown was implemented all across the nation. It was the deliberate attempt of the authors to execute an indigenous study, to systematically examine the underlying relationship of fear of negative events and OCS with psychological well-being and the moderating role of harm avoidance in the context of the COVID-19 pandemic. This study will contribute to existing literature on pandemics and their impact on psychological well-being. Secondly, a majority of studies focus on China, Europe, USA and other developed countries; and there is less literature which focuses on the South Asian region, and Pakistan in particular. Thirdly, this study can provide an overview of psychological well-being during the critical time of COVID-19. Understanding of OCS can further expand the comprehension

of mental health during pandemics and its after effects.

Method

A correlation research design and non-probability purposive sampling method was used in the research study. The sample consisted of both men and women between 28-35 years old (*Age* 30.64; *SD*, 2.58), adults between the age of , 28-31 (N=75, 49.3%), and 32-35 (N=74, 50.7%) residing where spread out of COVID-19 was high, having TV/ computer/ mobile access, social media exposure at least 7 hours (Garfin, Silver & Holman, 2020) and at least more than one family member require out of home exposure on daily bases, were approached. However, health workers, individual suffering from physical illness like diabetes, high blood pressure, cancer, psychological disorders and diagnosed OCD patient were not included in the sample.

Assessment Measures

Fear of COVID-19 Scale

Ahorsu, et al. (2020) characterized a scale on a 4-point Likert-style estimation instrument for individuals in age range of 18 years and above. Satıcı et al. (2020) state that the tool was developed on a sample of 717 adult participants living in the United states in English language. Cronbach's alpha estimation of the tool appeared as 0.91. Concurrent validity was supported with depression, $r = 0.425$ and anxiety, $r = 0.511$. The responses went from "strongly agree" to "strongly disagree". An absolute score was determined by summing up the total item score which went from 7 to 35. The psychometric property of fear of COVID-19 scale within current research is was .79.

Experiential Avoidance Questionnaire

Initially a round one 170 item tool was administered on N=312 undergraduate students. In the second stage a revised version of tool was administered on another group of undergraduate's adult students in the English language. Sahdra, et al. (2016) developed a 7-point Likert assessment instrument for Turkish society. The sub-scales of behavioral prevention, distress aversion, procrastination, denial, and distress endurance are integrated. The tool comprises 30 statements, 5 statements from all domains. Instead of the total score, only the scores of subcategories have been considered. The reliability value of Cronbach's alpha=.85 was found to be adequate with good internal consistency. The reliability of the Multidimensional Experiential Avoidance Questionnaire in the present investigation is .85.

Obsession with COVID-19 Scale

It has been constructed in the English language on two large samples of adults $n = 775$ and $n = 398$, residing in the United States. Lee (2020) evaluated the tool on a five-point Likert type on 0 to 4 ('not at all' to 'nearly every day') when the statement best relates to the respondent for the recent 2 weeks. The reliability value of the tool is $\alpha > .83$. It had solid factorial, construct and validity. The Cronbach's alpha reliability value is 0.75 in the current study.

Coronavirus Reassurance Seeking Behaviors Scale

It was constructed on adults (N= 453) living in the United States using the English language. It had solid factorial, construct and validity. Lee et al. (2020) tool evaluated a five-point Likert type on 0 to 4 ('not at all' to 'nearly every day') when the statement best relates to the respondent for the past 2 weeks. This is a reliable instrument with $\alpha = .90$, and a construct associated with the coronavirus concern. Severity scores were obtained by adding responses to all statements ranging from 0 to 20. Total scores ≥ 12 recommend the above average reassurance seeking activity. The psychometric properties of Corona-virus Reassurance Seeking Behavior are .76 in the current study.

Psychological Wellbeing

It was constructed on a sample of adults N=1018, who were 25 years and above using the English language. Further different studies have been carried out to validate the psychometric properties of the 18-item version of Ryff's Psychological Well-Being Scale in different populations and languages. Internal constancy varied between 0.78 and 0.96. For 6 subscales the test retest reliability ranged between 0.78 and 0.97. Ryff & Keyes (1995) consisted of 18 items assessed on a point Likert scale. The reliability value of Cronbach's alpha .87 was found to be adequate. The reliabilities of Psychological well-being scales in the present study are .78.

Demographic Information Sheet

The study also investigated the influence of different demographic variables consisting of age, gender, education, monthly income of the household, family system (nuclear or joint) and number of siblings, no of children, no of family members as well as profession, and use of social media.

Procedure

Permission to conduct the research was sought from the Departmental Academic and Research Committee (DARC), Riphah Institute of Clinical and Professional Psychology, (Reference No. RICPP/06k20/00025), and the Board of Advanced Studies and Research (BASR). Furthermore, permissions to use the questionnaires in the study were granted from the original authors. They were assured that the questionnaires would be used only for academic purposes. Participants' email lists were generated by the administration of various departments of government and private universities, and sent to them via mail survey, google form during the lock down situation, the research couldn't approach them physically. Participants were also guaranteed anonymity, privacy and confidentiality of the information they would provide. They were also provided researcher's and supervisor's email addresses in case they wanted information regarding results.

A pilot study was conducted via google forms to 30 students of various departments of Riphah International University. It was carried out to test the logistics of the study, to ascertain time consumed in filling and comprehending the form. Moreover, participant's feedback was obtained to improve/ revise/ explain any item of the questionnaire. The pilot study also provided the indication regarding participant's response rate. The findings of the pilot study indicated that the questionnaires were comprehensible and it took almost 30 minutes to complete the questionnaire. The participant's response rate was 80% and their feedback was affirmative. The researcher communicated gratitude to the participants via email for their cooperation and participation in the study.

The main study was conducted via questionnaires (mail survey) to 200 students of various universities. A total of 175 participants filled and returned the questionnaires. Out of 175, 25 response forms were discarded by the researcher as they reflected non-seriousness of the participants or were incomplete. Therefore, a total of 150 response forms were considered. After data collection, the participants were thanked for their participation through email. However, the result of study was shared with those participants who were interested in the results of the study and had requested the researcher to inform them. The results were reported accurately with utmost professional responsibility, without any fabrication.

Results

Table 1

Internal Consistency of the Present Study Measures and Subscales (N=150)

Scales	<i>M</i>	<i>SD</i>	Range	Cronbach's <i>a</i>
FOC	18.47	5.11	7-31	.78
OCB	7.43	2.76	4-15	.75
CRSB	9.61	3.71	5-22	.76
MEAQ	107.66	20.91	45-167	.85
S-BA	17.63	5.54	5-30	.78
S-DA	18.59	5.50	8-30	.733
S-P	17.79	4.70	6-29	.55
S-DS	19	5.72	6-30	.74
S-R	16.30	5.5	5-30	.68
S-DE	18.35	5.7	5-30	.71
PW	61.28	15.7	25-30	.78
S-A	11.38	3.31	3-30	.34
S-EM	10.41	3.5	3-30	.22
S-PG	9.7	4.31	3-21	.54
S-PR	10.36	3.7	3-21	.20
S-PL	10.85	3.7	4-20	.26
S-SA	10.27	4.1	3-21	.53

Note. FOC=Fear of COVID-19, OCB=Obsession with COVID-19 scale, CRAS= Coronavirus-Reassurance Seeking Behavior, MEAQ=Multidimensional Experiential Avoidance Questionnaire, S-BA=Subscale behavioral Avoidance, S-DS=Subscale Distraction Suppression, S-R=Subscale Repression, S-SE=Subscale Distress endurance, PW=Psychological well-being, S-A=Subscale Autonomy, S-EM=Subscale Environmental mastery, S-PG=Subscale Personal growth, S-PR=Subscale Positive Relation with others, S-PL=Subscale Purpose in life, S-SA=Subscale Self-acceptance

Table 1 shows the *internal consistency* of questionnaires employed in current research. Cronbach's Alpha reliability of fear of COVID-19, Obsession with COVID-19 scale, and Coronavirus Reassurance Seeking Behavior is .78, .75, and .76 respectively, which indicates high reliability. Likewise, the Multidimensional Experiential Avoidance Questionnaire and Psychological Wellbeing scale reliabilities appear to be .85 and .78 respectively which is above average reliability. Overall, results revealed most of the components have average reliability. The Cronbach's Alpha reliability values of Psychological Wellbeing sub-scales appeared to be below average. However overall Cronbach's Alpha Reliability of Psychological well-being scale is appropriate. In addition, the questionnaire items were also suitable for the current study, so the same questionnaire was employed.

Table 2

Comparison of Gender among study variables (N=150)

Variables	Men		Women		<i>t</i> (148)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
FOC	17.8	4.3	19	5.8	1.6	.09	.27
MEAQ	104	21	110	20	1.8	.07	.29
COCB	16.6	5.3	17.4	6.7	.91	.31	.13
PW	59	15	63	16	1.4	.15	.25

Note. M=Mean, SD= Standard Deviation

Table 2 revealed non-significant mean differences on fear of COVID-19 with $t(150)=1.6, p >.09$). The finding shows that there is no mean difference between women on fear of COVID-19 ($M=19, SD=5.8$) as compared to men ($M=17.8, SD=4.3$).

Table 3

Correlation of Demographics, Fear of COVID-19, Obsession Compulsive Symptoms, Coronavirus-Reassurance Seeking Behavior, Multidimensional Experiential Avoidance Questionnaire and Psychological well-being Scale (N=150).

Variable	N	M	SD	1	2	3	4	5	6	7
1.FOC	150	18.47	5.11	-						
2.OCB	150	7.43	2.76	.67**	-					
3.CRSB	150	9.61	3.71	.57**	.72**	-				
4.MEAQ	150	107.6	20.9	.21**	.09	.096	-			
5.PW	150	61.28	15.7	-.026	-.02	.003	.068	-		
6.No of children	150	1.52	.67	.22**	.29**	.363**	-.055	.036	-	
7.Use of Social Media	150	1.25	.43	.24**	.28**	.323**	-.143	.012	.29**	-

*FOC= Fear of COVID-19, OCB= Obsessive Compulsive Behavior, CRSB= Coronavirus Reassurance Seeking Behavior Scale, MEAQ= Multidimensional Experiential Avoidance Questionnaire, PW= Psychological wellbeing. **= $p < .0$.*

The result shows the fear of the coronavirus has an important positive association with obsessive-compulsive symptoms and harm avoidance. However, fear of coronavirus has a non-significant negative association with psychological well-being. Fear of coronavirus has a significant positive relationship with obsessive-compulsive behaviors. However, compulsive behavior has a non-significant positive relationship with harm avoidance and a negative non-significant relationship with psychological well-being. Harm avoidance has a significant relationship with the fear of the coronavirus. Moreover, harm avoidance has a non-significant relationship with psychological well-being and obsessive-compulsive behavior. Psychological well-being has a non-significant negative association with fear of coronavirus, harm avoidance, and obsessive-compulsive symptoms.

Table 4

Simple linear Regression for the prediction of coronavirus fear in relation to Obsessive-compulsive symptoms (N=150)

Variables	B	B	SE
Constant	2.7*		1.4
OCB	.78***	.66	.073
R ²	0.43		

Note. OCB= Obsessive Compulsive Behavior, SE= Standard Error

Table 4 shows the influence of Fear of COVID-19 on obsessive-compulsive symptoms in adults. The R² value of 0.43 revealed that the predictor variables explained 43% variance in the outcome variables with $F(1,148) = 114, p < .05$. The finding revealed that fear of coronavirus positively predicted obsessive-compulsive behavior ($\beta = .66, p < .001$). Simple Linear regression analysis showing the effect of fear of COVID-19 on psychological well being of adults (N=150).

Table 5

Simple Linear regression analysis showing the effect of fear of COVID-19 on the psychological well-being of adults (N=150).

Variables	B	B	SE
Constant	62.7***		4.83
PW	-.08	-.03	.25
R ²	.001		

Note. PW= psychological well-being, SE= standard error

However, findings also show the outcome of fear of COVID-19 on Psychological well-being among adults. The R² value of .001 revealed that predictor variables explained 1% variance in outcome variables with $F(1, 148) = .103, p > .05$.

The difference between R² states that 0.43 in OCS is considered as better predictor compared to .001 in PW. (Table 4 and 5)

Table 6

Moderation Analysis with Fear of COVID-19 and Psychological well being

Effect	Estimate	SE	95% CI		P
			LL	UL	
Constant	.64	.19	.27	1.03	.001
FCV19	3.4	1.2	1.14	5.7	.003
PW	-.03	.01	-.05	-.01	.002

Note. CI=Confidence Interval, LL=Lower Limit, UL=Upper Limit

Table 6 revealed that harm avoidance partially moderates the relationship between fear of COVID-19 and psychological well-being (Estimate=3.4, SE=1.2, 95%, LL=1.14, UL, 5.7, $p < .003$).

Discussion

Emergence of any pandemic adversely affects the population's psychological well-being of a massive level, and therefore researchers and clinicians attempted to identify the factors associated with it. Thus, during the outbreak of COVID-19, the researcher had also designed the study to identify fear of developing COVID-19 disease among individuals and its association with obsessive compulsive symptoms. Furthermore, the study attempted to ascertain the dual relationship of these two factors with psychological well-being and the moderating role of harm avoidance behaviors among adults in Lahore, Pakistan.

First and foremost it was hypothesized that there is a positive association of the fear of COVID-19 with obsessive-compulsive symptoms, and a negative association with psychological well-being amongst adults. Results of the study also revealed a significant positive relationship of the fear of COVID-19 with obsessive-compulsive symptoms and non-significant negative relationship with psychological well-being, which is further supported by literature as well. Samuels et al. (2021) study on US population of sample 2117 indicates that fear of the corona virus has a positive association with contamination obsession and compulsions, as well as a negative relationship with mental health. A study was conducted by Shah et al. (2022) on a sample of 714 university students of Pakistan to investigate the relationship of fear of COVID-19, social isolation and mental wellbeing. The finding indicates that fear of the corona virus has a negative relationship with the mental wellbeing of an individual. The finding of another study which was conducted in Saudi adults on sample of 1029, indicates that increase in the fear of corona had an inverse relationship with mental well-being which might be associated with decreased quality of life. During the threat of COVID-19, increased compulsive behaviors were cultivated to reduce or prevent from its adverse effect, which

might have led to positive psychological wellbeing. Thus, in the current study also the reason for non-significant results might also be fear of COVID-19 and that obsessive compulsive symptoms were acceptable and endorsed by society at that time. There might be some other reasons such as in Pakistan, individuals have to face economic issues, load shedding of gas and electricity, which in turn leads to resilience or else the individuals have to focus on other things regarding how to make the ends meet. Furthermore, during COVID-19, the implementation of lock down increased chances to spent more quality time with family and perform religious activities. Despite fear of COVID-19, these factors might have helped to improve the psychological well-being of individuals (Rashid et al., 2023)

Secondly, it was hypothesized that the harm avoidance behaviors serve as a moderator between the relationship of the fear of COVID-19 and obsessive-compulsive symptoms with psychological well-being. The findings of the study demonstrate that harm avoidance behavior partially moderated the association with FCV-19 and the psychological well-being of individuals. However, harm avoidance moderates the relationship between fear of COVID-19 and obsessive-compulsive behavior non-significantly. The findings of current study are supported by Rodríguez et al., (2022) study carried out on variables of COVID-19 anxiety, psychological well-being and preventative behavior on a sample of 5655 Americas and Caribbeans. The results showed that COVID-19 anxiety has a direct and significant effect on individual's wellbeing. Both preventive behavior ($\beta = .29, p < .01$) and well-being ($\beta = -.32, p < .01$) is significantly predicted by COVID-19 anxiety. The effects of COVID19 anxiety and preventative behavior explains 9.8% of the variance in well-being, whereas, 8.4% of the variance in preventative behavior is associated with COVID-19 anxiety. Other factors effecting the mental well-being of Pakistani student was financial loss, economic recession, inflation, lockdown restriction, loss of loved ones, blaming games and conspiracy theories. Salman et al. (2022). As the harm avoidance non-significantly moderates the relationship between fear of COVID-19 and obsessive-compulsive behaviors, the reasons might be that according to the lock down situation, the fear of COVID-19 and obsessive-compulsive behaviors were accepted by the community and the harm avoidance behaviors had no influence on the relationship of two variables.

Conclusion

It is concluded that COVID-19 fear during the pandemic has increased the coronavirus obsession and reassurance-seeking behavior among adults. These behaviors reduce the anxiety temporarily, but in the long term affect the psychological well-being of adults. The results also show that the harm avoidance trait is robust to the fear of coronavirus which results in a negative effect on the psychological well-being of adults during the pandemic.

Limitations and Suggestions

Data was collected via online platforms on account of the threat of COVID-19 and the lockdown imposed by the government. The majority of researchers used online platforms for data collection so the response rate of participants was below average. A limited age range i.e. only 28-35 year adults were included so that results would not be generalized to all age groups. Since indigenous tools in Urdu language were not available thus language and cultural barrier in comprehending the questionnaire might have influenced the findings of the study.

Future research can be conducted on a diverse population. In the present study, it was found that harm avoidance negatively predicted psychological well-being by increasing fear during the pandemic. In further studies, potential moderating variables such as psychological need frustration, existential loneliness, and meaninglessness may also be tested in the relationship of fear of COVID-19 and psychological well-being. Fear of negative events should be considered as a target of interventions for mental health and well-being in both stressful situations and clinical practice. In

addition, beyond the theoretical presumptions, it may be fruitful to explore real experiences through qualitative research methods such as phenomenology and grounded theory. The scale made and chosen should contain fewer items to reduce the internal confounding variables such as fatigue and boredom.

Implications

This study has manifold implications for Psychologists, Researchers and policy makers. It is valuable to healthcare departments in developing strategies which will help in reducing the fear of negative events/ fear of developing any viral disease and its impact on psychological wellbeing. Resilience and coping strategies must be advocated nationwide, to reduce the associated morbidity.

In addition, this study would help in adding some indigenous findings to the existing literature and help in combating obsessive-compulsive behavior to improve patients' psychological health and well-being.

Policy makers also need to be sensitive regarding public consensus incentive. Although cross-cultural differences do exist in implementing policies, policy makers should consider the socio-cultural factors and economic situation of the country, which ultimately has strong impact on psychological well-being of individuals.

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