The International Journal of
INDIAN PSYCHOLOGY

Research Paper

Fears of COVID-19 and positive mental health: mediating effects of working conditions post lockdown

Mrs. Nida B. Syed[1]*

ABSTRACT

A sudden outbreak of the current pandemic poses a serious threat to the positive mental health of the people across the globe including the professionals who are resuming back work post lockdown. The aim of the current study was therefore, to examine the impact of fears of COVID-19 on Positive Mental Health with the mediating effects of working conditions of professionals post lockdown. Measures of the constructs were obtained by the online Google form which consists of Fears of COVID-19 Scale by Ahorsu et al. (2020) and Positive Mental Health Scale by Lukat et al. (2016), from a sample of 110 professionals aged between 20-50 years working in the state of Karnataka, India. Positive Mental Health constituted the criterion variable whilst fears of COVID-19 and working conditions of professionals were treated as predictor variables. Two-way ANOVA was employed. Results shows that fears of COVID-19 is a significant negative predictor of positive mental health (r= -0.134; p < 0.05), there is no significant difference in the level of fears of COVID-19(t= -211, p> 0.05 level) and positive mental health (t=. 618, p> 0.05 level) experienced by professionals either working from home or commuting to office every day for work and a combination of fears of COVID-19 and working conditions predicts variance in positive mental health (R^2=0.036; p< 0.05). It was concluded that combined fears of COVID-19 and working conditions has an impact on positive mental health of the professionals post lockdown, but this impact is low (only 3.6%).

Keywords: *COVID-19, Positive Mental Health, Working Conditions*

COVID-19 is an infectious disease caused by severe acute respiratory syndrome corona virus 2(SARS-CoV-2). Common symptoms include fever, cough, fatigue, shortness of breath or breathing difficulties, and loss of smell and taste. While most people have mild symptoms, some people develop acute respiratory distress syndrome (ARDS) possibly precipitated by cytokine storm, multi-organ failure septic shock, and blood clots. The incubation period may range from one to fourteen days (EBioMedicine, 2020). COVID-19 is the evolving threat that the world is facing since the end of 2019 when the WHO China Country Office was informed of pneumonia of unknown cause, detected in the city of Wuhan in Hubei province, China. The World Health Organization (WHO) on March 11 declared COVID-19 a *pandemic*, pointing to the over 118,000 cases of the corona virus

[1]Assistant Professor, Indian Institute of Psychology and Research (IIPR), India
*Responding Author

illness in over 110 countries and territories around the world and the sustained risk of further global spread (Ducharme, 2020). Since March, 2020, in response to the COVID-19 pandemic, many countries have been on lockdown (at different levels of severity), restricting many activities and businesses that involve gatherings of large numbers of people in close proximity (Kostoff, 2020). Likewise, to check community transmission of the disease, a nationwide lockdown was declared in India from 25 March, 2020 extending till 17 May, 2020.

Fear is an emotion induced by perceived danger or threat, which causes physiological changes and ultimately behavioral changes, such as fleeing, hiding, or freezing from perceived traumatic events. Fear in human beings may occur in response to a certain stimulus occurring in the present, or in anticipation or expectation of a future threat perceived as a risk to oneself (Beck & Emery1979). Fear is an innate part of human nature and we humans innovate specific fears as a result of learning, usually called as "*Fear Conditioning*" in psychology, which implies that fear can be learned by experiencing or watching a frightening traumatic accident. In the context of the current scenario of pandemic, the fears of COVID-19 were induced and enhanced by certain predictors which includes psychological vulnerability factors (i.e., intolerance of uncertainty, worry, and health anxiety), media exposure, and personal relevance (i.e., personal health, risk for loved ones, and risk control) (Mertens et.al. 2020). According to a survey conducted in Oct, 2020 by Statista Research Department-India, to understand how different Indian generations are coping with the fear of novel corona virus outbreak, it was seen that a majority of the older adults (65years plus) and adults (43-65 years) were least afraid of contracting the virus but over 30% of 24-39 years age group are found to be were fairly scared of COVID-19. Due to the deadly nature of the virulent infection, the people are grappled with fear of death (Xiang, et al. 2020), getting infected, and being in the areas where others are tested positive (Jiang et al. 2020; Lin 2020). Fears pose a serious threat to our well-being, hence, cannot be left unattended (Pappas et al. 2009); the same implies to the fears of COVID-19 too.

Positive Mental Health has been defined as a state of well-being whereby individuals recognize their abilities, are able to cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their communities. It includes subjective well-being, perceived self-efficacy, autonomy, competence, and recognition of the ability to realize one's intellectual and emotional potential (WHO, 2002). Undeniably, the fear of illness may translate into a range of mental health outcome and the same goes with the fears of COVID-19 too. Researchers suggested significant impact of fear of illness on subjective psychological well-being (Huppert, 2009; Ahorsu et al. 2020; Harper et al. 2020; Newby et al. 2020; Parlapani et al. 2020;). Shigemura et al. (2020) found an association between heightened fear of illness and the potential development of mental health disorders even among healthy people during the current pandemic. Research results of a recent KFF poll put forth that almost 45% of the adults in the United States reported that their mental health has been negatively impacted due to worry and stress over the corona virus. (Panchal et. al, 2020). Studies reported that depressive patients had started complaining of anxiety related to fear of COVID-19. Some patients expressed the fear of contracting the infection, while others expressed uncertainty related to losing the job or familial disturbances (Ahuja, 2020). Satici et al. 2020 has reported that fears of COVID-19 have positive relationship with psychological distress and it negatively predict wellbeing. Similar results have been reported by Alyami et. al. (2020) in his study done on 1029 Saudi nationals putting forth that fear of COVID-19 was directly associated with mental well-being, which in turn was associated

with lower quality of life. Studies done during the lockdown period has shown that fears of COVID-19 have negative impact on the mental health of the individuals across the globe (Satici et al. 2020, Alyami et. al. 2020; Sood and Sharma, 2020; Ahuja, 2020; Huppert, 2009; Ahorsu et al. 2020; Harper et al. 2020; Newby et al. 2020; Parlapani et al. 2020; Shigemura et al., 2020).

These lockdown measures which were adopted to put a check on the spread of virus had severe impacts on the economy of the world. Thus, the economical conditions across the globe has forced organizations to open again making the employees to start work again either from home or office. So, from June 2020, Indian professionals were also asked to resume back work. Face masks, temperature checks and sanitizers had become the new normal of our surroundings. But the true challenge, however, is ensuring the psychological and emotional well-being and stability at the workplace. Management needs to recognize that many employees may have been either traumatized or significantly burdened by this COVID-19 ordeal. A sudden outbreak of the pandemic poses a serious threat to the mental health across the globe including the professionals resuming work either from home or commuting to office, post lockdown. On the basis of the empirical evidences and the theoretical background presented, the current study aim is to study the impact of fears of COVID-19 on Positive Mental Health with the mediating effects of working conditions of professionals post lockdown. The study looked at four specific objectives with four corresponding hypotheses. The first objective was to study the impact of fears of COVID-19 on Positive Mental Health among professionals post lockdown and the corresponding hypothesis was,

H_1: *There will be significant negative impact of fears of COVID-19 on Positive Mental Health among professionals post lockdown.*

The second objective was to study the impact fears of COVID-19 in professional with regards to their working conditions, and its corresponding hypothesis was,
H_2: *There will be significant difference in the level of fears of COVID-19 in professionals working from office and working from home post lockdown.*

The third objective was to study the level of Positive Mental Health professional with regards to their working conditions post lockdown, and its corresponding hypothesis was,
H_3: *There will be significant difference in the level of Positive Mental Health in professionals working from office and working from home post lockdown.*

The fourth objective was to study the combined effect of fears of COVID-19 and working conditions onto Positive mental health of the professionals post lockdown
H_4: *A combination of fears of COVID-19 and working conditions will predict significant variance in the positive mental health of the professionals post lockdown.*

METHODOLOGY
The current study used a quantitative, non-experimental research design involving the use of 2*2 factorial model which lay emphasis on two predictor variables namely fears of COVID-19 and working conditions- work from office or work from home and the criterion variable was positive mental health of the professionals post lockdown. The sample consisted of the 110 professionals who are working full time either from home or office within the age range

of 20-50 years from the state of Karnataka, India. The study was undertaken using Non-Random sampling techniques such as convenience and snowball sampling.

An informed consent sheet and the socio-demographic sheet-including the participant's age, gender, marital status, location, occupation, qualification, years of experience and working condition were prepared. The current study used Fears of COVID-19 Scale by Ahorsu et al. (2020) and Positive Mental Health Scale by Lukat et al. (2016) to access the variables. The data was collected online by Google Forms, a questionnaire was constructed for the purpose which includes the informed consent, socio-demographic sheet followed by both the scales (refer Appendix-A). The collected data was scored and interpreted based on the norms specified. The data obtained was analyzed by using two-way ANOVA to study the impact of Fears of COVID-19 onto Positive Mental health with mediating effects of working conditions of the professionals post lockdown.

RESULTS

The analysis of the socio-demographic variables indicates that the sample consisted of 110 professionals, including males (47.3%) and females (52.7%) in the age group 20-50 years (M= 29.13%; SD= 0.65), mostly single (68.2%) and postgraduate (61.8%) working in the Karnataka State of India.

Descriptive Analysis of the total sample (N=110) shows that the mean score of Fears of COVID-19 among professionals irrespective of their working condition is found to be M=15.43; SD=0.55, which indicates that participants has average level of fears of COVID-19 and the mean score for Positive Mental Health is M=20.67 SD=0.49, which indicates that participants are experiencing high level of positive mental health post lockdown. [Refer Table-1].

Table 1 showing Descriptive Statistics for COVID-19 and Positive Mental Health variables

	N	Minimum	Maximum	Mean		Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
COVID-19 Score	110	7	35	15.43	.559	5.858	.747	.230	.249	.457
PMS Score	110	6	27	20.67	.498	5.227	-.778	.230	-.078	.457
Valid N	110									

This goes in consistent with the expectation that positive mental health is high with low or average level of fears of COVID-19 among professionals. After the descriptive statistics was calculated, Pearson product–moment correlation coefficient was carried out between the fears of COVID-19 and positive mental health variables of the professionals regardless of their working conditions (either working from home or from office), to establish the direction and magnitude of association between them. The correlation coefficient between fears of COVID-19, and positive mental health for professionals calculated to be r =-.181 ; p < 0.05 which clearly indicate the significant negative correlation between them (refer table 2) , which means that increase in the level of fears of COVID-19 for professionals will lead to decrease in their positive mental health. Results shown by the descriptive statistics and Pearson product–moment correlation coefficient seems to provide support for *hypothesis H₁:*

There is a significant negative impact of fears of COVID-19 on Positive Mental Health among professionals post lockdown, proving that fears of COVID-19 is deteriorating the positive mental health of professional post lockdown too.

Table 2: Showing the results of Pearson product–moment correlation coefficient between the fears of COVID-19 and positive mental health variables

Correlations		COVID-19 Score	PMS Score
COVID-19 Score	Pearson Correlation	1	-.181
	Sig. (2-tailed)		.059
	N	110	110
PMS Score	Pearson Correlation	-.181	1
	Sig. (2-tailed)	.059	
	N	110	110

In order to compare the levels of fears of COVID-19 among professionals working from home or office Independent sample t-test was employed. Results shows that for professionals working from office (N=55; M=15.31; SD=6. 06) and for professionals working from home (N=55; M=15.55; SD=5.69), df= 108, t= -211, p= .834 is not significant at 0.05 level (refer Table 3). Therefore, hypothesis *H2: There is significant difference in the level of fears of COVID-19 in professionals working from office and working from home post lockdown,* is rejected indicating that there is no significant difference in the level of fears of COVID-19 experienced by professionals either they are working from home or commuting to office everyday for work.

Table 3: Showing the results of Independent sample t-test of fears of COVID-19 among professionals working from office and working from home.

				t-test for Equality of Means				
Fears of COVID-19 Sores	**N**	**Mean**	**SD**	**t**	**df**	**Sig. (2-tailed**	**Mean difference**	**Std. Error Difference**
Work from Office	55	15.31	6.064	-211	108	.834	-.236	1.122
Work from Home	55	15.55	5.699					

Levene Test for equality of variance, F=.041 Sig=.840

Similarly, for comparing the levels of positive mental health among professionals working from home or office again Independent sample t-test was employed. Results shows that for professionals working from office (N=55; M=20.98 SD=4.66) and for professionals working from home (N=55; M=20.36; SD= 5,762) df= 108, t=. 618, p=.538 is not significant at 0.05 level (refer Table 4). Therefore, *H3: There is significant difference in the level of Positive Mental Health in professionals working from office and working from home post lockdown,* also gets rejected indicating that there is no significant difference in the level of positive mental health of professionals either they are working from home or commuting to office everyday for work.

Table 4: Showing the results of Independent sample t-test of positive mental health and working conditions- work from office and work from home

Positive Mental Health Scores	N	Mean	SD	t-test for Equality of Means				
				t	df	Sig.(2-tailed)	Mean difference	Std. Error Difference
Work from Office	55	20.98	4.66	0.618	108	.538	.618	1.000
Work from Home	55	20.36	5.76					

Levene Test for equality of variance, F=.041 Sig=.840

Then multiple regression analysis was performed to establish the combined effect of fears of COVID-19 and working conditions onto positive mental health of the professionals post lockdown. Multiple regression analysis reflects that both the predictor variables, fears of COVID-19 and working condition together predicted 3.6% of the variation in the positive mental health (R^2= 0.036). The predictor variable fears of COVID-19 is found to be significant negatively related to the positive mental health (β= -0.16, t=-1.88, p=.05), which means that for every increase of 1 on the fears of COVID-19, positive mental health will decreases by 0.16 (refer table 5). Therefore, *H₄: A combination of fears of COVID-19 and working conditions will predict significant variance in the positive mental health* is accepted indicating that a combination of fears of COVID-19 and working conditions has a negative impact on the positive mental health of professionals post lockdown but this impact is low (3.6%).

Table 5: Regression analyses of predictor variables-fears of COVID-19 and working condition onto positive mental health

Model	Un-standardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	24.013	2.018		11.902	.000
Fears of COVID-19	-0.16	0.08	-0.17	-1.88	0.06
Working Conditions	-0.58	0.988	-0.05	-0.58	0.55

R^2=0.036, F= 1.981; p<0.05
a.   Predictors: (Constant), Working condition, fears of COVID-19 score
b.   Dependent variable: Positive Mental Health score

DISCUSSION

Since the outbreak of current pandemic COVID-19, several researchers have detected negative associations of fears of COVID-19 with positive mental health across the globe during lockdown period (Satici et al. 2020, Alyami et. al. 2020; Sood and Sharma, 2020; Ahuja, 2020; Huppert, 2009; Ahorsu et al. 2020; Harper et al. 2020; Newby et al. 2020; Parlapani et al. 2020;Shigemura et al., 2020). This study aims to investigate the effect of Fears of COVID-19 on Positive Mental health of the professionals with the mediating effect of working conditions post lockdown, i.e. when the "second wave" of the pandemic has begun but, due to the landscape occur in the economy, the professionals were asked to resume their work either from home or office. In consistent with the previous researches, the empirical findings of the current study also found significant negative correlation between fears of COVID-19 and positive mental health (r= -0.134; p < 0.05). This inverse relationship between COVID-19 and positive mental health can be explained that fears is as 'an awareness and appraisal of danger (Beck & Emery, 1979) and in the current situation of

pandemic COVID-19, fears of health, death and unknown had severely affected positive mental health of people including professionals too.

The relationships between working conditions with fears of COVID-19 and positive mental health is not found significant. Thus, we can say that professionals either working from home or office, experiences no difference in their level of fears of COVID-19 and its corresponding impact on their positive mental health. The combined interactional effect of fears of COVID-19 and working conditions is found to be very less (3.6 %), Thus, we can say that now after seven months of living with pandemic, people had started developing *resilience-* which is the ability to mentally or emotionally cope with a crisis or to return to pre-crisis status quickly (de Terte, 2014). Indian professionals have started developing psychological and behavioral capabilities in response to current ongoing pandemic COVID-19 that is helping them to cope with the fears associated with it and thus, whether they are commuting to office for work or are working from home their level of fear of COVID-19 and its negative impact on positive mental health is more or less same.

Limitations and Directions for Future Research
The current study has few limitations, the sample consists of participants with wide age range from 20 years to 50 years; people with different professions and only from the state of Karnataka. Age may exert influence on the level of fears and the corresponding positive mental health. This should be taken into consideration in future researches, which can be conducted with the same age- group either the younger, middle-aged or older group of participants. Also the sample consists of people from different professions, as the participants from different professions may have different organizational conditions that may be affecting their level of fears of COVID-19 and its impact onto corresponding positive mental health. Therefore, future study can be done with the people from same professional background. All the participants are currently working in Karnataka, thus future study can be directed to see the impact of various other states of India as well. A reason that suggests that these problems are not widespread in the study because the findings depicted by the current study are found to be consistent with previous researches.

Implications of the study
The present study contributes to the understanding of the fears of COVID-19 and its impact on positive mental health with the mediating effects of working conditions of the professionals post lockdown. The empirical findings show that the fears of COVID-19 have reached to an average level but still has significant negative impact onto positive mental health of the professionals post lockdown. People are developing resilience against the fears of COVID-19 and trying to live life normally by taking necessary precautions- face masks, sanitizers, social distancing etc required to survive with it but still its negative impact is evident on their positive mental health.

REFERENCES
Ahorsu, D. K., Lin, C. Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2020). The Fear of COVID-19 Scale: Development and initial validation. *International Journal of Mental Health and Addiction.*https://doi.org/10.1007/s11469-020-00270-8

Ahuja, S. (2020). Experts hint at a rise in mental illness due to COVID-19, suggest inculcating positive thoughts. NDTV News. https://swachhindia.ndtv.com/experts-hint-at-a-rise-in-mental-illness-due-to-covid-19-suggest-inculcating-positive-thoughts-43866/ [Google Scholar]

Fears of covid-19 and positive mental health: mediating effects of working conditions post lockdown

Alyami, Mohsen, De Albuquerque, Julia Vajda, Krägeloh, Christian U.; Alyami, Hussain; Henning,Marcus A(2020).Effects of Fear of COVID-19 on Mental Well-Being and Quality of Life: A path analysis. *Research Square*.DOI:10.21203/rs.3.rs-59161/v1

Beck A. T., Emery G. (1979). Cognitive therapy of anxiety and phobic disorders. Center for Cognitive therapy. [Google Scholar]

"COVID-19 and vascular disease". (2020) *EBioMedicine*. 58: 102966. doi:10.1016/j.ebiom.2020.102966. PMC 7438984. PMID 32829782.

Doshi, Dolar; Karunakar, Parupalli; Sukhaboji, J. Rao; Jammula, S. Prasanna (2020). Assessing Coronavirus Fear in Indian Population Using the Fear of COVID-19 Scale. May, 2020. *International Journal of Mental Health and Addiction*. DOI: 10.1007/s11469-020-00332-x

de Terte, Ian; Stephens, Christine (2014). "Psychological Resilience of Workers in High-Risk Occupations". *Stress and Health*. **30** (5): 353–355.

Harper, C. A., Satchell, L. P., Fido, D., & Latzman, R. D. (2020). Functional fear predicts public health compliance in the COVID-19 pandemic. *International Journal of Mental Health Addiction*. https://doi.org/10.1007/s11469-020-00281-5.

Huppert, F. A. (2009). Psychological well-being: Evidence regarding its causes and consequences. *Applied Psychology: Health and Well-Being, 1,* 137–164. doi:10.1111/j.1758-0854.2009. 01008.x

Lukat, Justina; Margraf, Jürgen; Lutz, Rainer; Van der Veld, William M. & Becker,Eni S.(2016) Psychometric properties of the Positive Mental Health Scale (PMH-scale *BMC Psychology*.volume 4, Article number: 8

Mertens, Gaetan; Gerritsen, Lotte; Duijndam, Stefanie; Salemink, Elske; Engelhard, Iris M. (2020). Fear of the coronavirus (COVID-19): Predictors in an online study conducted in March 2020. *Journal of Anxiety Disorders*.Volume 74, August 2020, 102258https://doi.org/10.1016/j.janxdis.2020.102258

Newby, J., O'Moore, K., Tang, S., Christensen, H., & Faasse, K. (2020). Acute mental health responses during the COVID-19 pandemic in Australia. *medRxiv*. https://doi.org/10.1371/journal.pone.0236562

Panchal, N., Kamal, R., Orgera, K., Cox, C., Garfield, R., Hamel, L., Muñana, C. (2020). The implications of COVID-19 for mental health and substance use. *Health Reform*, 21 April 2020. https://www.kff.org/health-reform/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/. [Google Scholar]

Parlapani, E., Holeva, V., Voitsidis, P., Blekas, A., Gliatas, I., Porfyri, G. N & Bairachtari, V. (2020). Psychological and behavioral responses to the COVID-19 pandemic in Greece. *Frontiers in Psychiatry*, *11*, 821. https://doi.org/10.3389/fpsyt.2020.00821

Satici, B., Gocet-Tekin, E., Deniz, M. E., & Satici, S. A. (2020). Adaptation of the Fear of COVID-19 Scale: Its association with psychological distress and life satisfaction in Turkey. *International Journal of Mental Health Addiction*. https://doi.org/10.1007/s11469-020-00294-0.

Sood, Sarita; Sharma, Ananya (2020). A moderated-mediation model of fear of illness and subjective psychological well-being during COVID-19 pandemic. *Research Square.*

Statista Research Department survey. Level of fear of contracting COVID-19 India 2020 by age group. Oct 16, 2020

World Health Organization, Geneva: Strengthening mental health. Resolution of the Executive Board of the WHO (2002). EB109.R8. [Google Scholar]

Appendix

Appendix A:
a) Socio Demographic Sheet:
Age:
Gender:
Location:
Marital Status:
Qualification:
Occupation:
Working from Home/ Working from Office:
Are you infected from COVID-19:
Is anyone close to you is infected with corona virus:

b) Fears of COVID-19 Scale by Ahorsu et al. (2020):
Please respond to each item by ticking (√) one of the five (5) responses that reflects how you feel, think or act toward COVID-19

Fear of COVID-19 Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1 I am most afraid of Corona					
2 It makes me uncomfortable to think about Corona					
3 My hands become clammy when I think about Corona					
4 I am afraid of losing my life because of Corona					
5 When I watch news and stories about Corona on social media, I become nervous or anxious.					
6 I cannot sleep because I'm worrying about getting Corona.					
7 My heart races or palpitates when I think about getting Corona.					

The Fear of COVID-19 Scale (FCV-19S) (Ahorsu et al., International Journal of Mental Health and Addiction, 2020) is a seven-item scale which has been validated and shown to possess good psychometric qualities in studies of participants from multiple countries. More specifically, reliability values such as internal consistency (α =.82) and test–retest reliability

(ICC =.72) were acceptable. Item scores are combined into a sum score with higher scores indicating higher fears of COVID-19.

c) Positive Mental Health Scale by Lukat et al. (2016).

Using the scale below, please indicate to what extent each of the following items is true for you.

	Item	Disagree	Slightly Disagree	Slightly Agree	Agree
1.	I am often carefree and in good spirits.				
2.	I enjoy my life.				
3.	All in all, I am satisfied with my life.				
4.	In general, I am confident.				
5.	I manage well to fulfill my needs.				
6.	I am in good physical and emotional condition.				
7.	I feel that I am actually well equipped to deal with life and its difficulties.				
8.	Much of what I do brings me joy.				
9.	I am a calm, balanced human being.				

The 9-item **PMH-**scale was developed in order to provide a brief, uni-dimensional and person-centered instrument to assess positive mental health (Lukat et al. 2016). Participants respond to statements. on a 4-point Likert scale ranging from 0 (do not agree) to 3 (agree). Item scores are combined into a sum score with higher scores indicating higher positive mental health. The test-retest reliability of the PMH-scale was found to be .81 ($p < .01$). The internal consistency of the PMH-scale was 0 .93