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PANIC OR PANDEMIC: ROLE OF MENTAL HEALTH ISSUES IN HARNESSING THE PERCEIVED POST-COVID THREATS AND TURNOVER INTENTIONS AMONG EDUCATION SECTOR EMPLOYEES

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Abstract

The present study attempts to investigate impact of the perceived post-Covid threats on the lives of the teachers and staff in higher education institutions of Pakistan, focusing specifically on turnover intention and mental health issues. The sample size of 384 included teachers and staff of the higher education institution of Rawalpindi & Islamabad region of Pakistan. Structural equation modelling using Smart PLS along was used for data analysis. The results show that there is a strong impact of perceived post-Covid threat on the turnover intentions provided the conditions of mental health i.e., stress, anxiety and depression among teachers in Higher Education sector. The study has implications for the top management and HEC Pakistan to modify the exiting polices by introducing practices and procedures to reduce the pressure on teachers and staff under these difficult times. A few policy recommendations are also presented to deal with the post-covid world of high volatility, complexity, uncertainty and anxiety.

Keywords: *Percieved post-Covid threats, turnover intentions, mental health, stress, anxiety, depression.*

PANIC OR PANDEMIC: ROLE OF MENTAL HEALTH ISSUES IN HARNESSING THE PERCEIVED POST-COVID THREATS AND TURNOVER INTENTIONS AMONG EDUCATION SECTOR EMPLOYEES

INTRODUCTION

The world has witnessed unprecedented developments because of coronavirus (COVID-19) epidemic, which has wonder-struck the lives of millions of people all over the world [158]. The situation of "Panic during PANdemIC" was a life-threatening experience. The World Health Organization (2020) declared a global health emergency because of the epidemic. The globe is still dealing with post COVID-19 dilemmas with specific focus on the physical and mental health [124]. The first case of COVID-19 was reported on December 31, 2019, from Wuhan, China, and due to its global spread, until March 7, 2022, 445,096,612 confirmed cases and a total of 5,998,301 deaths were linked to the virus. In Pakistan, the first coronavirus case was reported on January 3, 2020, and by March 7, 2022, there had been a total of 1,514,258 confirmed cases, with a total of 30,265 fatalities (WHO COVID-19 Live Dahboard, 2022). Considering the nation's limited resources, controlling the Covid-19 outbreak in Pakistan was a significant issue. Health officials claimed that COVID-19 had been connected to the aggravation of mental health conditions [158]. The rise of mental illness in the general population and widespread epidemics of infectious diseases like COVID-19 were strongly correlated with psychological discomfort [14]. Psychological problems like anxiety, worry, sadness, despair, or insecurity can all develop when a health catastrophe like the pandemic occurs. [153]. Recent research also reveals that COVID-19 influenced mental health outcomes such as anger, anxiety, boredom, depression, fear, stigma, stress, and PTSD (Post-traumatic stress disorder) [4, 13,74]. More people are experiencing psychological distress as a result of globalization and easier access to information, which had made it simple for worries about uncertainty to turn into fears and anxieties. [5].

Higher education institutions (HEIs) in Pakistan, in particular, were not an exception, as staff and faculty personnel at local universities had encountered and still encounter mental health issues as a result of their continuous exposures to the virus. During these atypical pandemic periods, teachers faced high levels of stress and burnout, which sparked concerns about an increase in teacher turnover and an anticipated teacher shortage (31,44, 71]. Due to their frequent and prolonged contact with students at once in the classroom, teachers were especially vulnerable to the COVID-19 threat, particularly when most of the students utilized public transportation to get to the university. Teachers had to change how they taught in order to use synchronous and asynchronous instruction, as well as other novel methods. Additionally, they made an attempt

to establish connections with the families, coworkers, and students. According to Pakpour & Griffiths (2020) [104] teachers' perception of the COVID-19 threat caused stress, worry, and depression, which may raise their intent to leave the profession. Similarly, students at different academic levels faced various challenges as a result of the Covid-19 pandemic, which prompted the closure of all educational institutions worldwide [29]. To continue the educational process and repair the gaps that had appeared as a result of the present COVID-19 epidemic, Pakistan's Higher Education Commission (HEC), institutional administrators, professors, students, and other stakeholders were exerting enormous effort and planning.

Many different types of studies on the psychological impacts of the Covid-19 outbreak on patients, medical professionals, the general public, children, and the elderly had been carried out in Pakistan [20, 56, 66] however, no thorough investigation of the psychological consequences and mental health status of affected university faculty and employees has been conducted as of yet. The purpose of this study is to determine how the perceived threat of pandemic affected university faculty and staff members' mental health after this crucial time of COVID-19 infection, and how this in turn affected their intents to leave their jobs (HEIs). The rapid changes in Covid-19 trends along with mutations of virus made it difficult for experts to study how to deal with the variants and predict it effectively [138]. Fewer studies have explored the impact of the epidemic outbreaks on the Turnover Intentions in employees after its over [69]. Moreover, limited research studies focused on the teachers experiencing adverse psychological symptomology after the pandemic and no study on burnout among teachers was found [122]. Most of the qualitative studies in past investigated the effect of Perceived Threat of Covid on state anger [92] with limited empirical studies in this area of research [127]. During Covid-19 teachers at different educational level experienced different psychological symptomology with varied anxiety levels across different countries. Different levels of anxiety and depression measured by various research studies during Covid-19 [25]. Therefore, a thorough and complete understanding on the impact of Covid-19 pandemic can be developed by conducting more international studies [122]. Studies on prevalence anxiety, depression and stress among teachers after pandemic cannot be extrapolated to educational systems, cultures or economies in different countries [130]. Previous literature on relationship between Anxiety and Depression is inconclusive [57]. Also there is very little research on the effect of perceived post COVID threat on the turnover intentions of teachers [88, 116]. There is a need for continuous further studies to explore factors that caused high anxiety among individuals during pandemic to live normal life

without risking mental health problems [138]. Researchers are recommended to consider factors that affected turnover intentions in relation to work stress [60, 120]. Considering the significance of mental health issues as a mediating element, Figure 1 describes the need to evaluate how the perceived pandemic threats influenced an employee's intention to leave a higher education institute in Pakistan.

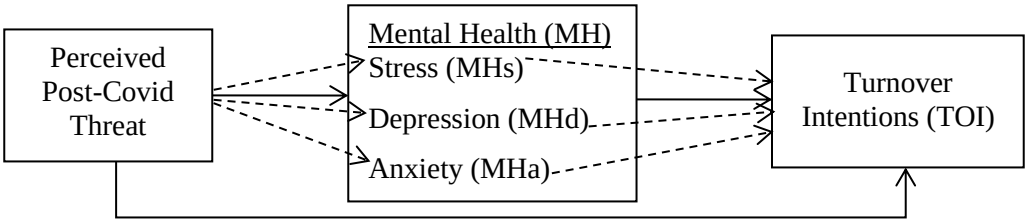


Fig 1. *Proposed model for Perceived threat of Covid and turnover intentions – mediating role of mental health.*

LITERATURE REVIEW

PERCEIVED POST-COVID THREATS AND TURNOVER INTENTIONS

Covid -19 influenced employers and employees in various sectors [113], creating a myriad of complex consequences of the outbreak on organizational outcomes such as job insecurity [18] and higher risk of turnover [1]. Fear of the COVID-19 pandemic increased work dissatisfaction along with organizational and professional turnover intentions [33]. A study found that community nurses' intentions to leave their jobs and professions were affected by their fear of COVID-19, making this a widespread problem for nurses [128]. Past literature has extensively explored the phenomenon of teachers' stress and burnout and their impact on mental health [65]. Recent research contests that teachers experiencing stress during the lockdown faced symptoms of anxiety, depression, and sleep disturbance due to increased workload [98]. The perception of teachers previously satisfied with the education system was reduced greatly during COVID-19 and created a fear about their professional careers [8]. The assessment of anxiety and its factors during Covid-19 was not optimal among the Chinese teachers. They experienced a high level of fearful behaviors associated with anxiety disorders [76]. During the COVID-19 pandemic, schools faced a problematic situation as a large proportion of the experienced teachers reaching retirement age decided to quit their jobs. As for the rest of the teachers who intended to stay on the job, they experienced high levels of job

dissatisfaction which adversely affected their performance and most importantly the academic progress of the students [151]. According to a study staff working under stressful and demanding conditions during the COVID-19 pandemic experienced burnout, anxiety, and depression [142]. Thus, in the light of the literature the study proposes the following hypothesis;

H1: *Perceived post-covid threat has a significant direct relationship with turnover intentions among teachers of higher education institutions*

PERCEIVED POST-COVID THREATS AND MENTAL HEALTH

Mental health is the condition in which mind functions well and produces positive results, healthy interpersonal connections, and the capacity to adapt to diversity and change. Good mental health is not only essential for personal well-being but is vital for a contribution to relationships and society at large [40]. Psychological stress affects the mental health and physical well-being of individuals in society nowadays [23]. The symptoms of three psychiatric or mental disorders namely stress, anxiety, and depression can lead to poor academic performance, ineffective communication, homicidal, suicidal, and abandonment intentions [46, 109].

People all over the world had been negatively impacted by COVID-19, which led to physical and mental health issues and illnesses [11,53, 121, 129, 141] creating an even greater impact on the well-being of teachers, concerned about their profession even after the threat was over [8]. Various studies have reported the impact of pandemic on the mental health of teachers in various countries such as the UK [7], Denmark [97], Canada [133], Spain [111] and Philippines [115]. According to a survey-based study on 59 countries on changes in life and psychological condition related to the COVID-19 epidemic, the world's mental health has been profoundly influenced. The respondents claimed that COVID-19-related life changes were highly predictive of increased rates of despair and anxiety afterwards [10].

H2: *Perceived post-covid threat has a significant direct relationship with mental health of teachers of higher education institutions*

STRESS, ANXIETY AND DEPRESSION

Stress is described as a situation in which events cause strain on the adaptive capability of an individual and hence refrain from effectively performing routine and habitual functions [50]. Anxiety is defined as unclear and uncomfortable emotions experienced after long stress or because of multiple stressors [72] The initiation of the stress response is indicated by the psychophysiological signals of anxiety [117] as both are closely related

behavioral and neural bases [27]. According to a study, stress affects mental health and well-being, and it's a significant factor in determining anxiety and depression [110]. Stressful life events are longitudinally associated with an increase in anxiety and sensitivity [87]. Although depression and anxiety are closely related, both differ in causes and consequences [17]. According to Olson and Surrette [101], anxiety and depressive disorders are closely related and are among the most prevalent psychiatric conditions since they fall under the general category of internalizing diseases [35]. Although highly correlated, yet a model of distinct anxiety and depression factors fits better than the model including positive and negative affect factors. Depression symptoms followed anxiety symptoms, while anxiety symptoms do not follow depressive symptoms [142].

Research supports a strong association between stress and depression. Results based on novel designs and methods of stress evaluation reveal that stressful life events lead to depression with some exceptions [49, 107] whereas some do not experience depression even after the stress of negative life events [49]. Stress can cause changes in the 5-hydroxytryptamine (5-HT) and corticotrophin-releasing hormone (CRH) /cortisol system resulting in particular types of depressive features namely aggression and anxiety [139]. One of the main causes of depression is discovered to be work stress, and the teaching profession is most susceptible to this risk factor [145], especially during and after the pandemic (102, 130]. According to previous literature, the symptoms of stress, anxiety, and depression overlap with one another [26, 89, 101]. Chronic stress leads to anxiety and depression [12] as prolonged exposure to a stress hormone called cortisol leads to depression symptoms [139]. A study investigating the interrelationship between these three mental disorders namely stress, anxiety, and depression among law enforcement personnel finds that the existence of one of the disorders is most likely to manifest the symptoms of either one or both others. All the relationships between these disorders were found positive [101]. The following hypothesis is proposed in support of the literature discussed above.

PERCEIVED POST-COVID THREATS AND STRESS

According to a study on perceived stress and burnout, 13% of teachers in online education experienced high levels of stress, and 66% of teachers felt moderate levels of stress as a result of pandemic. In the three stages of the Covid-19 pandemic, from May to December 2020, there was a considerable increase

(from 27 to 84 percent) in emotional stress and poor mental health among school instructors [97]. It has not only adversely affected the lifestyle of people but also harmed mental health resulting in different forms of psychological stress [134]. The perceived threat and intention of turnover escalates during and after unpredictable situational demand [65]. Previous studies reported stress among teachers and faculty members in Ethiopia [58], India [21], Macedonia [3], and North Ireland [128], Chile [82]. Stress experienced by teachers during a pandemic is a serious concern in the education sector [100] as it has greatly affected the health of the teachers and organizational outcomes such as frequent leaves, absenteeism, and poor work performance [85]. Covid-19 brought forth many problems such as stress, anxiety, depression, domestic violence, divorce, and many more affecting the teaching ability of teachers [6]. So, the present study investigates the relationship between the perceived threat of covid (PtCovid) and stress proposing the following hypothesis.

H2a: *Perceived post-covid threat has a significant relationship with Stress*.

PERCEIVED POST-COVID THREATS AND ANXIETY

The individual relationship between stress and anxiety proposed and established in hypotheses H2 and H5 respectively paves the way for the study to explore the possibility of studying the impact of PtCovid on the stress leading to anxiety. Occupational stress experienced during Covid-19 due to high expectations and inadequate sleep time and lesser social support caused anxiety and burnout among other psychological disorders even after the pandemic was over [28, 59]. Due to sleep disruption brought on by a pandemic-induced increased workload, instructors experienced stress, anxiety, and sadness [98], inability to adapt to taking online classes [16], prolonged work hours, and negative effects on the work and family balance [82]. Stressors such as social media misinformation and perceived threats caused anxiety and fatigue among teachers in an unprecedented crisis [63]. Teachers in Ireland reported adverse effects such as reduced job satisfaction, reduced work ability, burnout, and stress, deterioration in mental health, eating disorders, and excessive use of alcohol [90]. Teaching faculty, staff, and post-doctoral students of a university and its medical school reported anxiety up to 13% among all psychological factors affecting mental health and well-being [34]. A similar result was found among teachers in China where the prevalence of anxiety was around 13.67, with the prevalence of anxiety slightly higher in females (13.89%) than in male teachers (12.93) [76]. The present study attempts to study the impact of the perceived threat of covid on anxiety experienced by teachers and staff in HEIs in Pakistan by hypothesizing the relationship as follows;

H2b: *Perceived post-covid threat has a significant direct relationship with anxiety.*

PERCEIVED POST-COVID THREATS AND DEPRESSION

Anxiety caused due to fear or threat of pandemic can be overwhelming and lead to strong emotions and misinterpretation of health-related stimuli by individuals as signs of Covid infection induced depression [22]. According to a study, chronophobia is responsible for psychological distress, generalized depression, death, and health anxiety [73]. Studies conducted in various countries have found depression as one of the major repercussions of Covid-19 e.g., India [136], Pakistan [126], and China [91]. Professionals working in various educational centers, from nursery education to university level experienced high percentages of stress, depression, and anxiety in Spain [122]. Teachers encountered challenges because of changes in their environmental settings and teaching methods, which resulted in a variety of physical and emotional issues, including despair and pessimism [81, 136]. Women participants showed more stress and anxiety symptoms, with women having children displaying more depressive symptoms than ones with no children [122]. Similarly, perceived risk and fear of catching the corona virus positively predicts stress, anxiety, and depression [149]. Moreover, based on literature supporting the proposed hypotheses linking PtCovid, stress, anxiety, and depression the present study attempts to investigate the following hypotheses.

H2c: *Perceived post-covid threat has a significant direct relationship with depression*

MENTAL HEALTH AND TURNOVER INTENTION (TOI)

Employee turnover is one of the major challenges and research topics in fields of organization behavior and psychology [114], especially the labor-intensive service industry where turnover could be quite damaging [125]. Although turnover is a promising field of mental health study, the turnover results have not been sufficiently examined. It has been discovered that job stresses such as emotional tiredness, work-life conflict, and job discontent are influenced by turnover intention (TOI) [39].

H3: *Mental health has a significant direct relationship with turnover intentions of teachers of higher education institutions*

STRESS AND TURNOVER INTENTIONS

Stress due to its propensity to invoke psychological and physiological changes can prevent one from performing normal functions and can even compel one to quit a job [15, 80]. Turnover intention is defined as the intention of the workers to leave their job in a certain organization after some time and consideration [132]. Turnover in any profession can bring direct costs [94] but teacher turnover can lead to serious education-related consequences [75, 147, 152). Factors such as work life balance and workplace stress significantly effects the turnover Intention of employees which ultimately effects performance of both employees and organization [60]. In case of employees from different cultural backgrounds, task conflict significantly contributes towards Turnover Intentions among individuals, but a high perceived level of company diversity climate reduces perceived task conflict and hence weakens employee's intention to leave the organization [125]. Teachers' stress if not managed well in time can lead to job dissatisfaction, reduced teaching effectiveness, and burnout [65]. A study on the psychological and mental well-being of employees reports an increased level of fear of contracting the infection leading to decreased job satisfaction and increased organizational and professional turnover intentions [28]. Stress, anxiety, and depression affect employees leading to reduced job performance, reduced work environment satisfaction, and poor interpersonal skills which in turn lead to turnover intention and weak peer relationships [42, 45]. Yet the literature suggests exploring the turnover factors and processes to help in building predictive as well as preventive models. The present study in support of literature proposes the following hypothesis.

H3a: *Stress has a direct significant relationship with turnover intention*

ANXIETY AND TURNOVER INTENTION

Covid-19-related anxiety because of increased job demands, communication issues, and lack of administrative support is an important stress-related factor contributing to teacher burnout during Covid 19 [112]. Anxiety and fatigue about catching Corona experienced by the employees increase their turnover intention [64]. A study on Work From Home (WFH) employees finds that misinformation and the threat of Covid-19 triggered anxiety and social media fatigue resulting in lower levels of work engagement [63]. Anxiety and stress have a significant positive relationship with one another [55]. Work-related anxiety is a common predictor of employee burnout [93]. Hypothesis H7 proposed earlier on the basis of the past literature provides sound argumentative and literature support for the following hypothesis which attempts to explore the impact of stress leading to anxiety eventually leading to the turnover intention

among teachers in HEIs. The relationship between stress, anxiety, and depression has been discussed in past studies [30, 101, 118] and in highly stressful conditions make this association between anxiety and depression even stronger [30]. So, given the literature support on the relationship between anxiety and depression the study proposes the following hypothesis.

H3b: *Anxiety has a direct significant relationship with employee turnover Intention*

DEPRESSION AND TURNOVER INTENTION

Stress and depression have significant negative effects on job satisfaction among teachers [36, 108]. Teachers in Ireland experienced occupational stress with 82 % experiencing moderate or high-level personal burnout and 79% reported work burnout [90]. A study on the effects of depressive symptoms on the professional quality of life on TOI reveals that turnover intentions can increase from 2.81 to 4.60 times in presence of depressive symptoms [105]. Mental disorders have been found to significantly contribute to absenteeism, turnover, and leave intentions [2]. The outcomes of depression, anxiety, and stress have also been associated with negative outcomes like lower levels of general satisfaction [61, 95] disturbed psychological functioning [131] increased burnout, negative productivity and compromised physical health [95]. The literature supporting the proposed hypothesis H9 and H12 proposed earlier, focus on the relationship between stresses leading to Anxiety which in turn leads to depression.

H3c: *Depression has a significant direct relationship with Turnover Intention.*

MEDIATING ROLE OF MENTAL HEALTH

Fear of Covid is a significant contributor to mental health problems i.e. depression, anxiety, and stress [48]. Chinese researchers found a major mental health burden on the Chinese public during a Covid-19 outbreak while reporting moderate and severe symptoms of anxiety, stress, and depression in the population since the early phase of the pandemic [54]. According to a study conducted on hotel employees examining the psychological effects of operating a quarantined hotel, there exists augmented fear of Covid-19 leading to mental health issues whereas depression, anxiety and stress had a significant impact on TOI]. A study investigating the mediating role of depression, anxiety, and stress between job strain and TOI among male and female teachers found that

depression, stress, and anxiety do mediate the relationship between job strain and TOI [55]. The present study attempts to explore the impact of mental health disorders i.e., stress, anxiety, and depression on the relationship between PtCovid and TOI among teachers in HEI's in Pakistan by proposing the following hypotheses.

H4: *Mental health mediates the direct relationship between the perceived post-covid threat and turnover intentions*

H4a: *Stress mediates the direct relationship between the perceived threat of covid and turnover intentions*

H4b: *Anxiety mediates the direct relationship between the perceived threat of covid and turnover intentions*

H4c: *Depression mediates the direct relationship between the perceived threat of covid and turnover intention*

RESEARCH METHODS

COMMON METHOD VARIANCE (CMV)

Harman's single-factor test [155] was used to examine common techniques variation. At 40% threshold level 27.06% of the variance was explained by a single factor while the study's primary variables explained 83.24% of the total variance. Considering this, CMV is not a problem for this investigation, according to Hair et al. (2017) [156]. Before distributing the questionnaire, participants were told about the voluntary participation and data confidentiality requirements, and a code unique to them was assigned. This helped to reduce the social desirability bias. (ii) Independent and dependent variables were divided into discrete parts and dispersed over various time periods during the questionnaire design phase.

PARTICIPANTS AND PROCEDURES

The selected population for this study is teaching faculty working in Higher education institutes of Pakistan. For a population greater than 10, 00,000 elements, a sample of minimum 384 respondents must be selected [154]. So, a sample of 400 respondents was selected. The study sample included a homogenous sample of 400 employees working in higher education institutions in the Rawalpindi and Islamabad region in Pakistan. The respondents included both male and female teaching faculty appointed as lecturers, assistant professors, associate professors, and professors from all the university

departments. As the educational sector was directly under siege after the health care industry, with added pressures of facilitating students across the globe with minimum interruptions in the fluid conduct of all academic activities. This resulted in high levels of anxiety, stress, and depression among university teachers and staff. So, university teachers and staff were the appropriate choices according to the proposed causal model of the study. The Snowball sampling technique was used for the selection of samples for the study. It was made sure that individuals are in the best position to provide information related to job Anxiety, Stress, and Depression during the times of the COVID-19 pandemic, before accepting the referrals and inclusion in the study sample. Self-administered questionnaires were used for data collection.

For collecting data prior consent was obtained through emails from relevant authorities of selected universities. For assuring the confidentiality of data a cover letter was attached along with an empty envelope for the respondents to seal their responses afterward. Out of 400 questionnaires distributed among different universities, only 344 were received back. Out of these only 308 responses were used for data analysis as 36 questionnaires were discarded for incomplete responses. The response rate of the study is 77%. Following Table 1 gives details about the respondents demographics profile.

Table 1. Demographic profile of respondents.

S #	Demographics		%
1	Gender	Male	50
		Female	50
2	Age	less than 25	3.9
		between 25 to 35	56.8
		between 36 to 45	33.1
		between 46 to 55	6.2
3	Education	diploma holder	1.9
		under graduate	2.9
		post graduate	56.2
		PHD	27.9
		Other	11.0
4	Income	less than 20000	3.6
		between 20000 to 30000	15.3
		between 30000 to 40000	15.3

		between 40000 to 50000	15.9
		between 50000 to 75000	32.8
		more than 100000	17.2
5.	Experience	less than 2 years	17.5
		between 2 to 5 years	45.1
		between 6 to 10 years	29.5
		more than 10 years	7.8

n = 308

STUDY MEASURES

Items for Perceived Threat of Covid are adopted from the research study conducted by Irshad et al. [56] who measured perceived threat of covid using 13 items on 5-point Likert Scale. Mental health is measured using 21 Item based scale, DASS -21 using the emotional states of stress, depression and anxiety experienced by the respondents to describe their mental health. Dass-21 is a compact version of the previously developed scale DASS-42 by [84]. Assessing the severity of the main symptoms of depression, anxiety, and stress is the primary purpose of DASS. DASS-21 is often used in research and practice in clinical and non-clinical samples to identify people with high distress who may be more likely to develop psychopathologies because it is not a clinical diagnostic measure. It is preferable to other particular measures of depression or anxiety because of its brevity, simplicity, and capacity to capture stress symptoms in addition to those of sadness and anxiety [157].

The 21 items of DASS-21 are used to record the responses on five-point Likert Scale ranging from 1 (representing Strongly Agree) to 5 (representing strongly disagree). Turnover intentions measure is based on the scale for measuring intention for exit and neglect developed on the theoretical conception of Hirschman (1970). The response scale for the Turnover intentions based 3 items for Intention of Exit designed on a 5-point Likert scale ranging from Strongly Agree (represented by 1) to Strongly Disagree (represented by 5).

RESEARCH RESULTS

Structural Equation Modeling (SEM) was used for the causal analysis of the proposed relationships [123]. Smart PLS 3 is used for analyzing data. Confirmatory Composite Analysis (CCA) and structural analysis are performed for rigorous model assessment.

CONFIRMATORY COMPOSITE ANALYSIS (CCA)

For assessing the validity and reliability of scales used, confirmatory composite analysis is performed. Table 2 below shows all the indicator loadings.

Results reveal that all the indicator loadings are within the acceptable range of 0.7 and above [47]. A few measures having values closer to 0.7 (e.g. MHa1 – 0.689) were also retained as they can be rounded off to 0.70 easily. Only three measures i.e., Ptcovid1 (0.306), Ptcovid 6 (0.014), and Ptcovid 12 (0.281) had very low indicator loadings, hence, they were not used for data analysis. This confirms the overall reliability and validity of the scales used for the study.

Table 2. Indicator Outer Loadings.

	MH - Depression	MH-Anxiety	MH-Stress	PtCovid	TOI
MHa1		0.689			
MHa2		0.746			
MHa3		0.755			
MHa4		0.714			
MHa5		0.701			
MHa6		0.677			
MHa7		0.687			
MHd1	0.781				
MHd2	0.746				
MHd3	0.602				
MHd4	0.765				
MHd5	0.694				
MHd6	0.723				
MHd7	0.701				
MHs1			0.693		
MHs2			0.718		
MHs3			0.761		
MHs4			0.768		
MHs5			0.698		
MHs6			0.737		
MHs7			0.714		
Ptcovid10				0.774	
Ptcovid11				0.662	
Ptcovid13				0.695	
Ptcovid2				0.766	
Ptcovid3				0.736	

Ptcovid4	0.692	
Ptcovid5	0.711	
Ptcovid7	0.742	
Ptcovid8	0.697	
Ptcovid9	0.752	
TOI1		0.792
TOI2		0.737
TOI3		0.764

n=308, MHa= Mental health – Anxiety, MHd = Mental Health – Depression, MHs = Mental Health – Stress, PtCovid = Perceived threat of covid, TOI = Turnover Intention

Figure 2 below shows the measurement model of the study. The path coefficients show the direction of relationships among the variables used for the study.

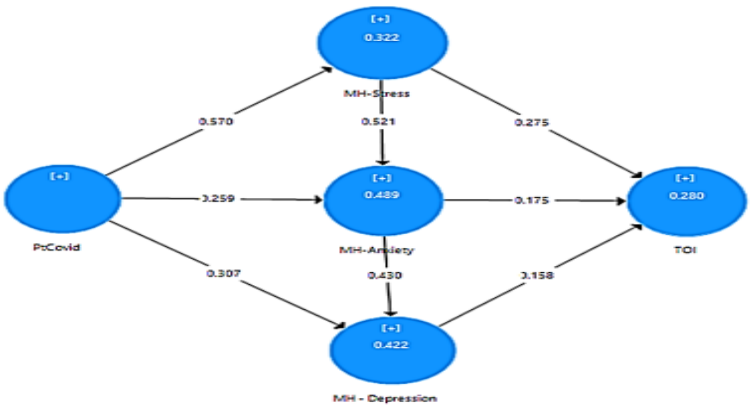


Fig 2. *Measurement model.*

Moreover, the internal consistency measures (CA, rho_A, and CR) in Table 3 below show high levels of reliability as all the values are above the minimum threshold level of 0.70 as suggested by [47]. The values of CA range from 0.700 for TOI to 0.778 for MHa. The values of rho_A range from 0.736 for TOI to 0.783 for PtCovid. Moreover, the values of CR range from 0.777 for TOI to 0.858 for MHs. <

Table 3. *Measures of internal consistency.*

	CA	**rho_A**	**CR**	**AVE**
MHd	0.731	0.749	0.787	0.548

MHa	0.778	0.779	0.839	0.628
MHs	0.735	0.766	0.858	0.512
PtCovid	0.769	0.783	0.822	0.522
TOI	0.700	0.736	0.777	0.639

n=308, MHa= Mental health – Anxiety, MHd = Mental Health – Depression, MHs = Mental Health – Stress, PtCovid = Percieved threat of covid, TOI = Turnover Intention

Similarly, the Average Variance Extracted (AVE) values confirmed the convergent validity of scales. The values of AVE range from 0.512 to 0.639, which are above the acceptable threshold levels of 0.5 and above. This means that the indicators explain the relevant construct more than 50% [47]. For discriminant validity, the Fornell Larker test shows (Table 4) that all the diagonal values are higher than all the non-diagonal values, exhibiting high levels of discriminant validity. Likewise, the HTMT criterion also confirms that all the constructs measure unique variables as all the values are below the threshold level of 0.90. This ensures that constructs are unique and are measuring distinct and dissimilar traits.

Table 4. *Discriminant Validity.*

	Fornell Larker Criterion					**HTMT Criterion**				
	MHd	**Mha**	**MHs**	**PtCovid**	**TOI**	**MHd**	**Mha**	**MHs**	**PtCovid**	**TOI**
MHd	**0.661**									
MHa	0.587	**0.654**				0.785				
MHs	0.590	0.647	**0.570**			0.771	0.707			
PtCovid	0.554	0.558	0.558	**0.567**		0.670	0.656	0.733		
TOI	0.455	0.462	0.501	0.529	**0.734**	0.651	0.615	0.733	0.661	

n=308, MHa= Mental health – Anxiety, MHd = Mental Health – Depression, MHs = Mental Health – Stress, PtCovid = Percieved threat of covid, TOI = Turnover Intention

STRUCTURAL MODEL

The structural model assessment was performed to analyze the hypothesized relationships. Figure 3. below shows the structural model of the study. The results of the study show a significant correlation between the perceived threat of Covid, mental health, and turnover intentions.

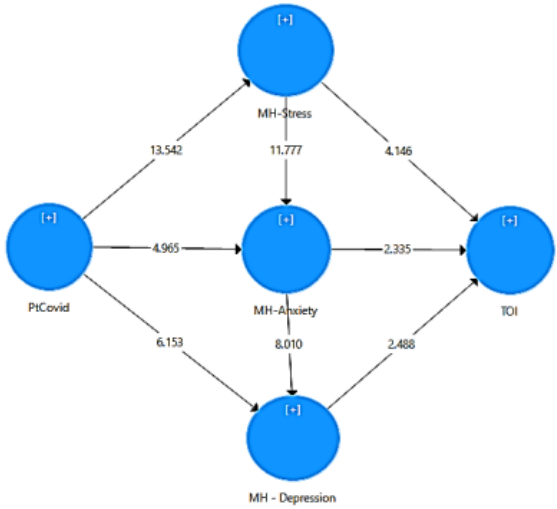


Fig 3. *Structural Model.*

For the hypotheses testing structural model, the assessment was performed by using the bootstrap method with 5000 samples. Measures of collinearity show that there is no multicollinearity among variables used for the study as all the estimates are below the threshold level of 5. Table 5 below shows the detailed results of hypothesis testing.

Table 5. *Structural Model Results.*

Hypotheses	Relationships	β	*t*-value	*p*-value	Bias Corrected CI (95%)		Supported
	Direct						
H1	PtCovid -> TOI	0.341	8.982	0.000	0.015	0.071	Yes
H2	PtCovid -> MH	0.521	11.777	0.000	0.138	0.401	Yes
H2a	PtCovid -> MH-Stress	0.570	13.542	0.000	0.074	0.169	Yes
H2b	PtCovid -> MH-Anxiety	0.556	13.171	0.000	0.473	0.639	Yes
H2c	PtCovid -> MH - Depression	0.546	13.319	0.000	0.15	0.354	Yes

H3	MH -> TOI	0.430	8.01	0.000	0.324	0.531	Yes
H3a	MH-Stress -> TOI	0.402	8.056	0.000	0.204	0.393	Yes
H3b	MH-Anxiety -> TOI	0.243	3.468	0.001	0.028	0.325	Yes
H3c	MH - Depression -> TOI	0.158	2.488	0.013	0.029	0.279	Yes
	Mediation						
H4	PtCovid -> MH -> TOI	0.297	8.779	0.000	0.23	0.359	Yes
H12	PtCovid -> MH-Stress -> TOI	0.157	3.797	0.000	0.074	0.234	Yes
H13	PtCovid -> MH-Anxiety -> TOI	0.045	1.923	0.015	0.008	0.100	Yes
H14	PtCovid -> MH - Depression -> TOI	0.049	2.123	0.034	0.007	0.095	Yes

n=308, MHa= Mental health – Anxiety, MHd = Mental Health – Depression, MHs = Mental Health – Stress, PtCovid = Percieved threat of covid, TOI = Turnover Intention, CI = Confidence Interval

Estimation of the direct relationships in Table 5 above shows that the Ptcovid is significantly related with employee TOI (β = 0.341, t-value = 8.982, p = 0.000), mental health (β = 0.521, t-value = 11.777, p = 0.000), (stress (β = 0.570, t-value = 13.542, p = 0.000), anxiety (β = 0.556, t-value = 13.171, p = 0.000) and depression (β = 0.546, t-value = 13.319, p = 0.000). Moreover, estimation of direct relationship of mental health with TOI show that mental health is significantly related to TOI (β = 0.430, t-value = 8.01, p = 0.000), stress (β = 0.402, t-value = 8.056, p = 0.000) anxiety (β = 0.243, t-value = 3.468, p = 0.001) and depression (β = 0.158, t-value = 2.488, p = 0.013) are significantly related with TOI of employee.

Estimation of the mediation analysis show that mental health mediates the relation of perceived post-covid threat and turnover intentions (β = 0.297, t-value = 8.779, p = 0.000). Similarly, the determinants of mental health i.e., stress (β = 0.157, t-value = 3.797, p = 0.000) anxiety (β = 0.045, t-value = 1.923, p = 0.015) and depression (β = 0.049, t-value = 2.123, p = 0.034) fully mediates the direct relationship of Ptcovid and TOI of employees.

MODEL FIT

The model fit criteria in Table 6 below show that all the r-square and f-square values are significant. The r-square value for MH-Depression is 0.426 and for MH-Anxiety is 0.492. These are significantly high as these values explain that 42.6% and 49.2% of the variations in dependent variable are defined by MH-Depression and MH-Anxiety respectively. Similarly, for MH-Stress the value of r-value is 0.324 which means MH-Stress causes 32.4% variations in dependent variable which is considered as a moderate impact in behavioral studies. Moreover, the values of f-sqaure are significant which also ensure the model fir for the study. More over the relationship between constructs is explained in the Figure 4.

Table 6. *R* Square and *f* square

	***R* Square**	***f* Square**				
		MH - Depression	**MH-Anxiety**	**MH-Stress**	**PtCovid**	**TOI**
MH - Depression	0.426					0.018
MH-Anxiety	0.492	0.223				0.022
MH-Stress	0.324		0.361			0.048
PtCovid		0.113	0.089	0.48		
TOI	0.287					

BLINDFOLDING

The blindfolding approach is used to determine the model's prediction abilities, as recommended by [41, 136]. The construct cross-validity redundancy is shown in Table 7. The Q^2 results are significantly higher than zero, indicating that the model is capable of forecasting links that have been hypothesized. As a result, these factors can be kept in the model and have an impact. Endogenous construct has considerable predictive ability.

Table 7. *Blindfolding.*

	SSO	**SSE**	**Q^2 (=1-SSE/SSO)**
MH – Depression	2142	1839.77	0.141
MH-Anxiety	2142	1710.94	0.201
MH-Stress	2142	1937.01	0.096
PtCovid	3060	3060	
TOI	918	794.6	0.134

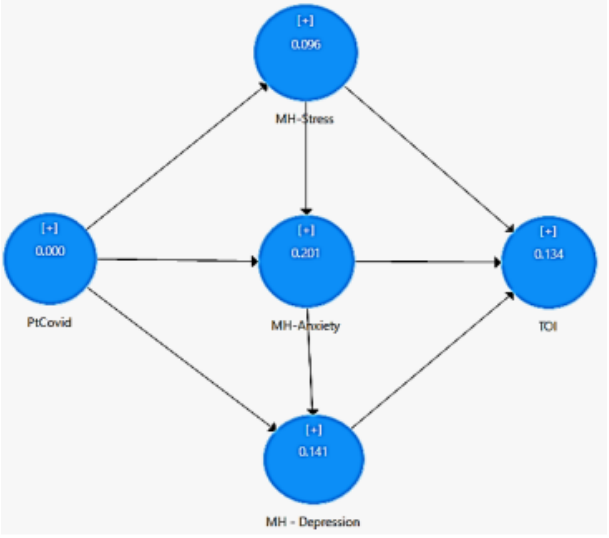
n=308

The diagram in Figure 5 demonstrates the blindfolded model.

Fig 5. *Model Blindfolding.*

DISCUSSION

During Covid-19, the perspective of teachers who had previously been happy with the educational system drastically decreased, which led to worry about their future careers [8]. The perceived Covid-19 danger continues to have an impact on people's psychological well-being, according to the World Health Organization (2020). By considering the psychological and behavioral effects of the perceived Covid-19 threat, this study adds to the body of previous research. Since teachers who had direct contact with students were more likely



to contract an infection, educational institutions switched to online instruction, which significantly increased the workload of teachers and affected the balance between their professional and personal lives, leading to stress, anxiety, and depression, which can undoubtedly have a variety of affective and behavioral effects [54]. On the other hand, not much study has been done on this subject. It's critical to comprehend the Covid-19 scenario from a teacher's point of view.

According to this study, perceived Covid-19 danger is a significant predictor of teachers' inclination to leave their jobs. The findings of H1 confirmed that perceived threat of covid has a significant relationship with the employee's turnover intention, suggesting that to retain the teachers, it is essential to reduce the perceived threat of infection. The results of the finding are consistent with

previous researches establishing that the potential for contracting the virus encourage intention to leave [33, 56, 116].

The findings of the study support H2, H2a, H2b, H2c that there does exist a significant direct relationship among perceived post-covid threat and mental health disorders, stress, anxiety and depression. Similar findings were reported by past studies like Fan et al., 2019 [159] and Goswami, 2015 [160]. The present study hypothesizes that the anxiety experienced by employees leads to depression (H3). The results study support H3, establishing significant direct relationship between anxiety and depression. The results of the finding are also supported by a world-wide survey reporting that in almost 45.7% of individuals one or more anxiety disorders caused a major life time depressive disorder [62]. Studies on the evolution of the comorbidity of these two mental health orders demonstrating that anxiety disorders precede appearance of the major depression disorders [61]. Van Praag [139] and Ardayfio and Kim [12] provides evidence that chronic exposure to the stress hormone cortisol causes anxiety and depression, and that people who have one of the diseases are more likely to have symptoms of the other or both than people who don't. Similar findings are reported by studies that prove that the circumstances surrounding Covid-19 affect the mental wellbeing by increasing the stress related symptoms [32, 124] anxiety [106, 140] and depression [161]. This is relatively consistent with past findings of Covid-19 related stress among teachers [70, 100, 150]. The results of a meta-analysis on prevalence of stress, anxiety and depression in teachers during Covid-19 indicate that teachers experienced 17% anxiety, 19% depression and 30% stress symptoms [122].

Covid-19 pandemic brought along with it a parallel pandemic of fear, anxiety and depression [52, 148] which lead to turnover intentions [68]. The findings of the current study are consistent with those of earlier studies [78], which identify anxiety as an initial phase of "psychological withdrawal," which ultimately leads to turnover. The present research's findings concur with those of another study proving that instructors under stress during the lockdown had signs of anxiety and sadness owing to an increased workload [98]. Present research is in line with findings mentioned above show that stress, anxiety and depression do lead to turnover intentions (H3, H3a, H3b, H3c) during Covid -19 pandemic. According to Saengchai [119], there exists a significant relationship of supervisor's intentions, job autonomy and job satisfaction with turnover intention among employees among the paramedical staff of Thai government hospital. Past studies indicate that job stress leads to high level of anxiety and depression and which causes job dissatisfaction [37] and this increases the

employee's motivation to leave an organization [19]. A study on employees working in pharmaceutical industry Thailand reveals that work stress and work life balance contribute significantly towards turnover intention and the work stress also negatively effects the health status and well-being of these employees [60]. According to Winer [146] anxiety turns into depression causing individuals to lose interest in activities causing anxiety and this eventually causes depression symptoms. Past studies have found that the depression is an important determinant of the turnover intentions among employees, especially teachers [52, 137] which supports the finding of the present study. The current study's findings on the detrimental effects of teachers' perceptions of the Covid-19 danger to their mental health are in agreement with previous research [7, 97, 111, 115, 133]. The results of the study support these hypotheses. These findings are consistent with results of past studies indicating that threat and fear of Covid leads to mental health issues such as stress, anxiety and depression has a significant impact on the TOI among employees [56, 86, 137, 24].

CONCLUSION

Covid-19 has potentially endangered humanity's survival. One of many other sectors which greatly affected by Covid-19 was education. Education sector is very important for the socio-economic uplift and prosperity of the country. Having said that, teachers are our only hope for furthering the mission of educating the young generation, as they are exposing their selves to various mental health-related issues (such as stress, anxiety, and depression) due to fear of getting infected by the virus. Apart from the mental health-related risks but the teachers' lives are also at risk as they are more prone to getting infected by the students while teaching them in face-to-face mode. Therefore, it is important to ensure the safety of mental health of teachers so that they can continue to educate people and do not think of quitting due to fear of getting infected.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

While there may be other factors as well, this study solely looked at the perceived threat of Covid-19 as a predictor of TOI. Future research may look into additional aspects, such as institutional defenses against Covid-19, workload, stress, anxiety, and depression experienced by the teacher. Only the psychological and behavioral effects of the perceived Covid -19 threat were examined in the current investigation. The research of performance-related consequences is nonetheless important as well. Future research may examine the effect of perceived threat of Covid -19 on worker productivity and

organizational output. The fact that this study only looked at the effects of the perceived threat of Covid -19 on mental health and TOI is another limitation. Future research may also look at further effects of perceived threat of Covid -19 i.e., on the work life balance of teachers and healthcare staff. Future research may examine the moderating impact of personality traits like psychological capital. Another limitation is the use of cross-sectional data in the current study. Future studies may employ a time-lag or longitudinal study strategy. The fact that the current study solely included data from instructors is another limitation. Future researchers may replicate this study using information from other occupations, such as salespeople, physicians, or paramedics. The banking and transportation industries might benefit from doing comparable research as their staff has continued to deliver services despite the risk of catching the virus. The antecedents of the perceived threat of Covid-19 were not examined in the current investigation. Future research may also look at the factors that can increase the perceived threat of Covid-19. Poor organization-level infection control procedures can be one of these factors.

IMPLICATIONS

Research studies on Covid-19 in different sectors and countries report varying degree of results and findings making the generalizability of these finding somewhat environment specific. Pakistan was among the first countries to institute educational institutions closures during pandemic. The present research contributes to body of research on pandemic in Pakistan by providing a better understanding and exploration of the contextual factors involved in leading to the turnover intentions of faculty and staff in HEI's in Pakistan. The study will facilitate in understanding the phenomenon of turnover intention and mental health during Covid-19 in the context of Pakistan and hence will serve as guidance in handling to avoid repercussion and adverse effects of the pandemic. The HEC and policymakers for HEIs need to plan and implement policies and regulations including workload, compensations, leave management, participation in decision making, and career development opportunities along with adequate social and psychological support and counseling, especially during pandemics to reduce the turnover Intentions among the teachers and staff. During the pandemic, the teachers performed as frontline workers ensuring teaching and other related task and activities by using a myriad of virtual instruction approaches, techniques, and pedagogies while adhering to the essential teaching protocols communicated from time to time by the HEC of Pakistan. Experiencing unavoidable stress became a reality for the teachers and staff in HEIs during the pandemic. Top management in the HEI can help reduce the stress experienced by teachers through management

support, limiting excessive teaching assignments and administrative tasks,nd providing guidance and training related to the use of new technologies, arrangements and teaching approaches, and modes of instruction from HEC during these stressful times. According to Mustari [96] the realization of quality education cannot possibly be separated from teachers who work hard to deliver quality learning and the fulfillment of the learning process by teachers can be achieved through utilization of today's advance and sophisticated technologies such as internet, zoom, email etc. Stress, anxiety, and depression experienced by the teachers during Covid-19 not only provokes TOI rather adversely affects the psychological as well as the physical well-being of the teacher. University management needs to provide health facilities in form of psychological counseling, and mental health days to alleviate the pressure experienced by them.

POLICY RECOMMENDATIONS

The majority of the teaching staff had never taught online, and as a result of their inexperience, they regarded it to be more challenging and inferior than teaching in person. They became demotivated, dissatisfied, stressed, and anxious as a result of their negative perceptions of online instruction. To better equip all teachers to teach effectively and confidently by offering pedagogical, technical, altitudinal, and moral support, HEC should direct HEIs to offer professional skill development trainings and workshops. In order to assist the institutions having difficulty with performing online assessments and final semester exams while assuring the intended quality of programs and course objectives and outcomes, HEC must develop policy guidelines for virtual and online assessments for students during Covid-19. One of the main causes of the instructors' mental stress during Covid-19 was a lack of suitable resources, including the internet, technical know-how, and generating online content. To help faculty deliver online lectures without being overworked or burdened, HEC should financially support HEIs in putting up IT infrastructure, hardware, and other supporting resources.

The institutions should take action to support the instructors in coping with the Covid-19-related stress, anxiety, and depression. They should be given empowerment and autonomy to adjust course contents and breakdowns, designing lectures and allocate their time which will give them flexibility and additional time needed for student and teacher interaction. Measures and instructions should be provided to HEI under HEC policy in order to lessen the

administrative burden. By introducing new mobile applications, management, teachers, and students can engage at predetermined periods. Creating an open educational repository will aid in giving faculty and students access to the recorded lectures. Designing weekly paper-based materials that enable teachers to grade exams and assign new ones for the next week is one approach. By mitigating the administrative burden from teachers, will not only help in ensuring their mental health and retention, it will also enable HEC and HEI's to benefit from faculty research and creativity to identify effective pedagogies, tools, practices and methods for online learning.

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