



IMPACT OF POST COVID-19 ON PSYCHOLOGICAL DISTRESS: MODERATING ROLE OF OCD SYMPTOMS AMONG NURSES

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Abstract

The present study investigates the impact of post-COVID-19 conditions on the psychological distress of nurses, with obsessive-compulsive disorder (OCD) symptoms serving as a moderating factor. The mental well-being of nurses is an imperative concern, given the unparalleled difficulties they have encountered in their capacity as primary healthcare professionals throughout the pandemic. SPSS analyses, including t-tests and regression, were conducted on a sample of 300 nurses with age range of 25 to 40. Nurses who exhibited symptoms consistent with OCD reported greater levels of psychological distress. Additionally, the moderating effect of OCD symptoms on the association between psychological distress and post-COVID-19 conditions was validated through regression analysis. The statistical significance of the differences in psychological distress was established through the utilisation of t-tests, whereas the complex interaction between OCD symptoms and post-COVID-19 conditions was elucidated through regression analysis. The implications of this study for the mental health of healthcare professionals are both academic and practical. It is recommended that support systems and targeted interventions be developed to address the distinct requirements of nurses, with the aim of bolstering their resilience and overall welfare amidst the COVID-19 pandemic.

Keywords: Post-COVID-19, psychological distress, Obsessive compulsive disorder

Introduction

The advent of the COVID-19 pandemic has not only posed an unprecedented threat to global public health but has also significantly impacted the mental well-being of frontline healthcare workers. Among these essential workers, nurses have played a pivotal role in combating the pandemic, often working tirelessly in high-stress environments. As the world transitions into the post-COVID-19 era, it becomes imperative to delve into the psychological repercussions faced by these healthcare professionals and to understand the potential moderating factors influencing their mental health. The psychological toll of the pandemic on healthcare workers is multifaceted, encompassing elevated levels of stress, anxiety, and depression. Prolonged exposure to high-risk situations, the fear of infection, and the emotional burden of witnessing the suffering of patients have contributed to a heightened state of psychological distress among nurses. Moreover, the aftermath of the pandemic introduces new challenges such as burnout, coping with trauma, and adjusting to a changed healthcare landscape.

Exploring the nuanced dynamics of psychological distress in the post-COVID-19 era is crucial for developing targeted interventions to support the mental health of nurses. One intriguing aspect that warrants examination is the potential moderating role of Obsessive-Compulsive Disorder (OCD) symptoms among nurses. OCD, characterized by intrusive thoughts and repetitive behaviors, may act as a unique lens through which individuals perceive and respond to stressful situations. The intersection of OCD symptoms with the challenges posed by the pandemic could offer valuable insights into the variability in psychological distress experienced by nurses. Understanding this moderating role is essential not only for tailoring interventions but also for advancing our theoretical understanding of how pre-existing mental health conditions interact with external stressors.

This study seeks to fill a critical gap in the existing literature by investigating the psychological

well-being of nurses in the post-COVID-19 period and examining the potential moderating impact of OCD symptoms on their mental health. By adopting a comprehensive approach, we aim to identify the specific dimensions of psychological distress, including anxiety, depression, and burnout, that may be influenced by both the lingering effects of the pandemic and individual variations in OCD symptomatology. Theoretical frameworks such as the stress-diathesis model and the transactional model of stress and coping provide a foundation for understanding how pre-existing vulnerabilities, such as OCD symptoms, may interact with environmental stressors to influence mental health outcomes. By integrating these frameworks, this study aims to unravel the intricate interplay between the broader context of post-pandemic challenges and individual differences in obsessive-compulsive tendencies among nurses.

In conclusion, as the world grapples with the aftermath of the COVID-19 pandemic, it is essential to prioritize the mental health of those who have been at the forefront of the crisis. This study aims to contribute to the growing body of knowledge on the psychological well-being of nurses in the post-COVID-19 era and to shed light on the moderating role of OCD symptoms. By doing so, we hope to inform targeted interventions that can support the resilience and mental health of nurses as they navigate the challenges of a changed healthcare landscape.

Objectives

1. To explore the relationship between Post-COVID-19, psychological distress and obsessive compulsive disorder symptoms.
2. To examine how obsessive compulsive disorder symptoms moderate between Post-COVID-19 and psychological distress

Hypotheses

1. There will be significant positive correlation between post covid-19, OCD symptoms and psychological distress among nurses.
2. There will be significant moderating role of OCD symptoms between post covid-19 and Psychological distress among nurses

Method

The present study was correlation study by using survey research design. Convenient sampling technique was used for collection of data.

Sample

The present study was correlation study by using survey research design. The sample of the study was consisted of ($N = 200$) nurses. Convenient sampling technique was used for collection of data.

Operational Definitions

Psychological distress Psychological distress will be operationally defined as the presence of clinically significant symptoms of anxiety and depression as measured by the Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983). Psychological distress is a broad term that encompasses a range of negative emotional states and symptoms related to mental health. Depression Anxiety & Stress Scales" (DASS) by Lovibond, S.H., and Lovibond, P.F. (1995).

Post covid-19. Post-COVID-19 will be operationally defined as the phase in which individuals have recovered from the acute infection of COVID-19, have completed the recommended isolation or quarantine period, and are no longer exhibiting symptoms of the virus (Smith, 2005) The Impact of Events Scale-Revised (Brom & Kleber, 1985) was used to measure post covid symptoms among women.

OCD symptoms. Obsessive compulsive disorder is a mental health condition characterized by the presence of recurrent, intrusive and distress thoughts (obsession) and repetitive behaviors/ mental acts that individual feels compelled to perform in response to the obsessions. These obsessions and compulsions often consume a significant amount of time and can interfere with a person's daily life and functioning (Foe et al., 2002). Obsessive compulsive Inventory - Revised questionnaire was used to measure the symptoms of OCD in person. This questionnaire can be suitable for both adolescents & adults 16 years, (piqueras et al; 2009)

Instruments

Psychological distress scale. The DASS-21, which was developed by Lovibond in 1995, includes

three distinct scales for measuring depression, anxiety, and stress. These scales are known for their high internal consistency and their ability to effectively differentiate and assess specific emotional states. The DASS-21 is suitable for use in both clinical and non-clinical settings. It employs a 4-point Likert-type scale, with 0 indicating "did not apply to me at all" and 3 denoting "applies to me very much." Extensive research has demonstrated the reliability and validity of the DASS-21. Multiple studies have confirmed the high internal consistency of the three scales, with Cronbach's alpha values ranging between 0.74 and 0.93 across various clinical and non-clinical samples. These studies, including Ali & Green (2019), Covic et al. (2012), Kyriazos et al. (2018), Pezirkianidis et al. (2018), Sinclair et al. (2012), and Sukantarat et al. (2007), contribute to the robustness of the DASS-21 as an assessment tool. The Depression scale within the DASS-21 encompasses items (e.g., 3, 5, 10, 13, 16, 17, 21) that effectively capture cognitive, affective, and somatic aspects of depression. This scale exhibits strong internal consistency, signifying that the items within the scale consistently measure the same underlying construct. Similarly, the Anxiety scale in the DASS-21, comprising questions like 2, 4, 7, 9, 15, 19, 20, has demonstrated a high level of internal consistency, as indicated by Cronbach's alpha values. This attests to the scale's reliability in measuring symptoms related to anxiety. The Stress scale within the DASS-21 evaluates an individual's stress level and includes items related to feelings of being overwhelmed, tense, and unable to cope with life's demands (e.g., 1, 6, 8, 11, 12, 14, 18). This scale also exhibits strong internal consistency, reinforcing the reliability of the items in measuring stress-related symptoms. Overall, the DASS-21 has consistently demonstrated its reliability and validity as a tool for assessing symptoms of depression, anxiety, and stress in various settings.

Obsessive Compulsive Disorder. In this study the use of obsessive compulsive Inventory - Revised questionnaire that is used to measure the symptoms of OCD in person. It consists of 6 subscales. All six subscales were used in this study such as; washing, checking, neutralizing, obsessing, ordering & hoarding. This questionnaire can be suitable for both adolescents & adults 16 years, (Piqueras et al; 2009). OCI-R has higher internal reliability ($r = 0.89$) & Cronbach ($r = 0.94$) (Wootton et al; 2015) (Gonner et al; 2008). OCI-R has been used as clinical & non-clinical significance. (Chasson et al; 2013). The Obsessive-Compulsive Inventory-Revised (OCI-R) is a widely used self-report questionnaire designed to assess the presence and severity of obsessive-compulsive symptoms in individuals. It is a revised version of the original Obsessive-Compulsive Inventory (OCI) and consists of 18 items. The OCI-R uses a five-point Likert scale, typically ranging from "Not at all" to "Extremely," to rate the frequency and distress associated with each item.

Post-COVID 19. In 1985 a Dutch version of Impact of event scale was developed by Brom & Kleber. On the basis of that research a modern scale of Covid-19 was developed. It is a 4 Likert type scale having total 15 items & three subscales. As it is a 4 Likert type scale. It has 0 to 4, 0 = not at all & 4 as often. The higher the score the greater the impact of that event. The Impact of Event Scale (IES) is a well-established self-report questionnaire originally developed by Horowitz, Wilner, and Alvarez (1979), measures the subjective distress experienced by individuals in response to a specific traumatic event. It consists of 15 items and assesses symptoms related to intrusion (re-experiencing the event) and avoidance (avoidance of reminders of the event). The reliability of the original IES has been reported to have good internal consistency, with Cronbach's alpha coefficients typically ranging from 0.80 to 0.90, indicating a high level of reliability.

Procedure

After taking the formal permission from the department the questionnaire were administered. All the subjects of the study ($n = 200$) voluntarily participated in the research. The participants were the nurses from different hospitals. Researcher insured them that all the information would be used for research purpose only. The participants were informed about purpose of study. They were asked to fill out their particulars (such as name, age, gender etc.) on the separate devised information sheet. After that they were handed over the booklets containing scales. 200 participants filled the questionnaire and were consistent in their motivation towards the goals of research. Proper instructions were given to the participants about how to fill the scale. They were requested to give genuine responses which reflect their feeling truly. After collection of data I entered the data and



conduct analysis on the data respectively

Results

The first hypothesis was that to explore the relationship between Post-COVID-19, psychological distress and obsessive compulsive disorder symptoms. Correlation analysis was applied and the results show a significant positive correlation between post COVID 19, psychological distress and OCD symptoms and the results are shown below in table 2. Second hypothesis was to examine how obsessive compulsive disorder symptoms moderate between Post- COVID-19 and psychological distress and the results are shown below in table 3.


Table 1 Psychometric properties of study variables (N=200)

Variables	N	M	SD	α
Covid -19	200	22.48	9.11	.88
Psychological distress	200	26.36	10.53	.88
OCD symptoms	200	30.84	12.07	.89

Table 2 shows psychometric properties of study variables. The reliability analysis indicates that the reliability coefficient of scale is .88, .88, and .89 respectively which indicates satisfactory internal consistency. The values of skewness for all the variables are less than 2 which indicate that univariate normality is not problematic.

Table 2 Correlations matrix for study variable

	12	3	4	5	6	7	8	9	10	11	12	13	14
1	_.78**	.93**	.51**	.54**	.62**	.62**	.60**	.47**	.51**	.49**	.51**	.48**	.65**
2	—	.94**	.51**	.54**	.57**	.60**	.56**	.50**	.51**	.52**	.56**	.53**	.68**
3		—	.54**	.58**	.63**	.65**	.61**	.51**	.54**	.53**	.57**	.53**	.70**
4			—	.72**	.68**	.88**	.48**	.42**	.38**	.48**	.45**	.36**	.55**
5				—	.37**	.91**	.52**	.44**	.38**	.47**	.45**	.39**	.56**
6					—	.88**	.46**	.46**	.43**	.43**	.46**	.42**	.57**
7						—	.54**	.49**	.44**	.51**	.51**	.43**	.62**
8							—	.49**	.67**	.57**	.60**	.48**	.81**



9	—	.45**	.63**	.52**	.47**	.76**
10	—		.55**	.53**	.50**	.78**
11		—		.52**	.44**	.79**
12			—		.57**	.79**
13				—		.74**
14					—	

*** $P < 0.001$ 1=Intrusion: 2= Avoidance: 3=Post Covid-19: 4=Depression: 5=Anxiety: 6=Stress: 7=Psychological distress: 8=Hoarding: 9=Washing: 10= Obsessing: 11=Ordering: 12=Checking: 13=Neutralizing: 14=OCD symptom.

Table 2 describes inter-correlations among scales. Results suggest that, all the variables such as post covid-19, psychological distress and OCD symptoms are positively correlates with each other and along with their respective subscales.

Table 3 Moderation of OCD symptoms between post covid-19 and psychological distress (N=200)

Variable	Model 1			Model 2		
	B	β	SE	B	B	SE
Constant	26.34***		.44	26.98***		.50
Covid-19	4.41***	.41***	.62		.42***	.61
OCD Symptoms	3.4***	.62***	.33	3.0***	.29***	.64
Covid-19*OCD Symptoms	-.912***	-.112 ^b	.360			
R ²	.42***			.48***		
ΔR^2				.011***		

Note. N = 300. ** $p < .01$. *** $p < .001$.

Table 3 shows the moderation of OCD symptoms between post covid-19 and psychological distress. In Model 1, the R² value of .42 revealed that the predictors explained 42% variance in the outcome with $F(2, 297) = 136.72$, $p < .001$. The findings revealed that covid-19 positively predict OCD symptoms ($B = .41$, $p < .001$) whereas covid-19 positively predict OCD ($B = .42$, $p < .001$). In Model 2, the R² value of .48 revealed that the predictors explained 48% variance in the outcome with $F(2, 297) = 6.41$, $p < .001$. The ΔR^2 value of .011 revealed 1% change in the variance of model 1 and model 2 with $\Delta F(1, 297) = .012$, $p < .001$. Findings show that OCD symptoms moderated the relationship between covid-19 and psychological distress.

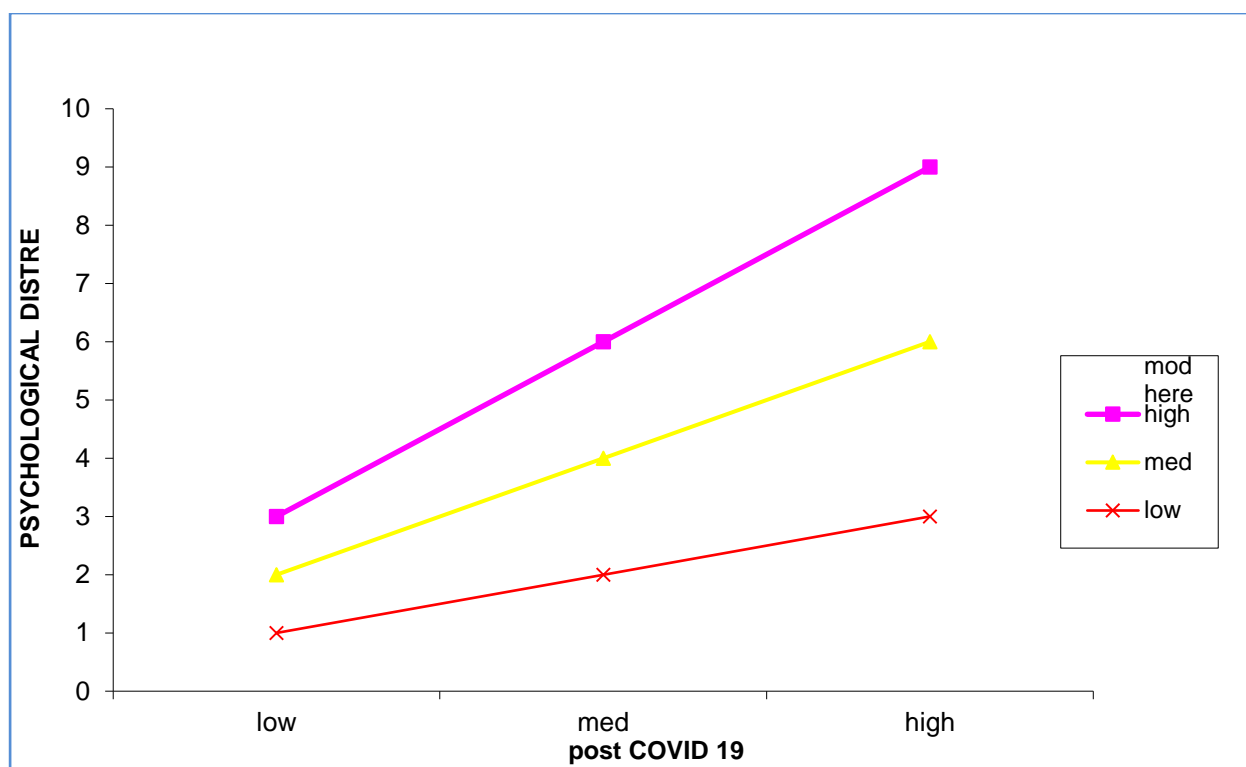


Figure 1 *Mod-graph with moderating effect of OCD symptoms between post-Covid19 and psychological distress*

Discussion

The study investigates the impact of the COVID-19 pandemic on nurses focusing on post-pandemic psychological distress and the potential moderating role of Obsessive-Compulsive Disorder (OCD) symptoms. The pandemic has triggered a global mental health crisis, with unique challenges for nurses due to societal expectations and gender-specific pressures. Research consistently shows that nurses, particularly young adults, are more susceptible to psychological distress, including anxiety and depression. The transition to adulthood, marked by significant life changes, can be especially challenging for women. Obsessive-Compulsive Disorder (OCD) is explored due to its potential influence on psychological distress during the pandemic. OCD symptoms, particularly those related to cleanliness and orderliness, may be heightened by pandemic-induced emphasis on hygiene practices.

first hypothesis stated that to explore the relationship between Post-COVID-19, psychological distress and obsessive compulsive disorder symptoms. Hypothesis is supported by literature. is no as such psychological distress present for Covid-19 because it was discovered and experience for the very first time in human history. Although a very high range of psychological distress was found in the general population and front line warriors like, Nurses, Doctors and Police etc. (Kang et al., 2020 QIU et al., 2020). Thus in this research the researchers have designed the cross-sectional and pilot study to find out the psychological distress and its characteristics among the population effected by Covid-19. An anonymous questionnaire was designed to find out the psychological distress. This study was conducted in the province of china named as Guangdong, The study is conducted at Zhongshan city from 15 February to 29th Feb 2020. 205 participant had participated and completed the research. A set of participant who got recovered from Covid infection and passed the period of quarantine was given the Chinese version of 9 item patient health questionnaire (PHQ-9) and 7-item. Generalize anxiety disorder to measure the security and prevalence of psychological distress. Total score of >10 depression and anxiety for both (PHQ-9 and GAD-7). There are four major categories in which psychological distress lies. (0-4) represents the minimum or number (5-9) is for Mild. (10-14) moderate, more than > 15 if for several levels of psychological distress, for PHQ-9 and

GAD -7. People who get encounter with Covid-19 have significantly higher level of depression (29.2%), and it also found a higher level of anxiety with ($p=0.016$). Comorbidity of depression with anxiety is highly significant with the range of ($p=0.086$). Patient who experienced Covid-19 is (9.3%) while general population is (14.3%) face several levels of depression. Survivors of covid-19 and the general population represented depressed mood range of ($p=0.038$) and somatic symptoms (<0.01). People face symptoms of anxiety first like irritability manifested easily getting annoyed and panic attacks. These symptoms are mostly formed in Covid-19 survivors.

As Second hypothesis was to examine how obsessive compulsive disorder symptoms moderate between Post-COVID-19 and psychological distress. Hypothesis was accepted along with literature support. Numerous studies have indicated a surge in OCD symptoms during the early stages of the COVID-19 pandemic, with a notable exacerbation observed in individuals suffering from contamination-related OCD (K. C., Li, H.). Even within the general population, there have been reports of OCD-like symptoms emerging in response to the pandemic (Shi, L. J., 2020). Interestingly, it was noted that self-reports of OCD symptoms tended to be more severe in online surveys compared to clinical visits, especially during the peak of the COVID-19 outbreak (Ma, J. D., 2020). Most of the research conducted in this area occurred during the spring and summer of 2020 when the pandemic was at its peak. For individuals already grappling with OCD, COVID-19 emerged as a significant stressor, particularly for those with hygiene-related symptoms (Hu, X. Z. (2020). Consequently, there is a pressing need for a gold standard approach to the treatment of OCD that recognizes its unique challenges during the pandemic. Hand washing became a universally recognized safety measure during the COVID-19 era, which posed a unique challenge for individuals with OCD, especially those struggling with cleanliness-related obsessions. The compulsion to wash hands reached unprecedented levels, further complicating the lives of OCD patients (Ji et al., 2020). Additionally, a considerable number of individuals harbored fears of contracting COVID-19, adding an additional layer of distress for those with pre-existing OCD symptoms (Ji et al., 2020). The study further examines the complex relationships among COVID-19, psychological distress, and OCD symptoms in young adult women. It identifies post-COVID-19 symptoms as a significant predictor of psychological distress, and OCD symptoms as a moderator in this relationship. In summary, the research offers nuanced insights into the interplay of pandemic-related stressors, mental health vulnerabilities, and the moderating role of OCD symptoms in nurses. These findings can inform targeted interventions and support strategies to address the specific needs of this demographic in the post-pandemic world.

CONCLUSION

In this study, the proposed hypotheses found significant positive results to support them. Significant Positive Correlation between Post COVID-19 and Psychological Distress among nurses. First hypothesis posited that there would be a significant positive correlation between post-COVID-19 experiences and psychological distress and OCD symptoms among women. This research has indeed found evidence supporting this hypothesis. This suggests that nurses who have experienced COVID-19 may be more likely to experience psychological distress, which could include symptoms of anxiety, depression, or other related issues. Significant Positive Correlation between Psychological Distress and OCD Symptoms also found. The second hypothesis proposed that OCD symptoms would play a significant moderating role between post-COVID-19 experiences and psychological distress among young women. This research has supported this hypothesis. This indicates that for nurses, the presence of OCD symptoms can exacerbate the impact of post-COVID-19 experiences on psychological distress. In conclusion, this study has provided valuable insights into the relationships between post-COVID-19 experiences, psychological distress, and OCD symptoms among nurses. These findings highlight the importance of considering mental health factors, such as OCD symptoms, in the context of post-pandemic psychological well-being for this demographic. This research contributes to our understanding of the complex interplay between these variables and may have implications for mental health interventions and support strategies for women impacted by the COVID-19 pandemic

Limitation/Suggestions

Large sample from different cities and provinces of Pakistan should be included in order to increase generalizability of the findings. More than one method should be used in order to decrease the level of social desirability. The current study was quantitative work, it is recommended for future researches to explore these variables qualitatively. Taking feedback from the participants can encourage and motivate them for future cooperation. More demographic can be used for wide ranging results as they could be worth significant for studying the relationship between the variables. Due to past time duration is exceed, we were unable to analysis severity of symptoms.

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