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## Effect of Conscientiousness and COVID-19-Induced Job Stress on Organizational Citizenship Behavior Among Healthcare Professionals

*Shayista Majeed, Sabiya Mufti, Sabzar Ahmad Peerzadah, Nazir Ahmed Nazir*  
University of Kashmir, Srinagar, India

### ABSTRACT

Drawing upon the tenets of trait activation theory, the present study aimed to explore the moderating effect of COVID-19-induced job stress on the association between conscientiousness and organizational citizenship behavior (OCB) among healthcare professionals. Data for the study were collected from 379 healthcare professionals in India through a systematic random sampling technique. The results revealed a positive impact of conscientiousness on OCB. Moreover, COVID-19-induced stress negatively moderated the relationship between conscientiousness and OCB. The study findings have, thus, contributed to the budding research stream on the consequences of global pandemics on social institutions and individuals in general and extended the validity of trait activation theory assumptions in particular. The study provides valuable practical insights that may assist authorities in devising policies that could help encourage employees to display more of these pro-social behaviors in times of natural calamities when such behaviors are of utmost necessity.

### KEYWORDS

conscientiousness, COVID-19-induced stress, organizational citizenship behaviors, public hospitals

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## Introduction

COVID-19, which emerged in December 2019 and was subsequently declared a pandemic on 11<sup>th</sup> March 2020 by the World Health Organization, impacted over 704 million people across the globe, with over 7.0 million deaths being reported to date (Coronavirus Tracker, 2024). The abrupt beginning of the COVID-19 pandemic has raised a threat to all institutions in general and to healthcare institutions in particular (Peerzadah et al., 2023). In the midst of this calamity, healthcare workers discharged their frontline professional roles with newer responsibilities and vigor to boost pandemic operations (Durgun & Tayfun, 2023; Kua et al., 2022). However, various studies have revealed that healthcare workers, who took a keen role in battling COVID-19, have been exposed to work overburden, loneliness, and an elevated risk of infection (Israelowitz et al., 2020; Leon & Brock Baskin, 2022; Nainu et al., 2020), therefore risking them to psychological distress and other mental issues (Huang et al., 2023; Konstantinov et al., 2022; Zhu et al., 2020). A report from McKinsey and Company also affirmed that “healthcare providers face the humanitarian tragedy of the COVID-19 pandemic; they also face unprecedented stress (individually and institutionally) around the world” (Baur et al., 2020). Therefore, COVID-19-induced job stress has posed several challenges including high work standards and a tough environment (Zhang et al., 2020). These challenges have the potential to cause negative employee reactions including workplace cynicism, deviant behaviors, and even intent to turnover (Shrestha & Jena, 2021). This can also impact the exhibition of pro-social behaviors including organizational citizenship behavior (OCB), a significant source of healthcare service quality (Zhang et al., 2020). Since healthcare organizations are constantly facing the challenge of shortage in resources, be it manpower or infrastructure, ensuring employees’ exhibiting OCB is quite necessary for organizational effectiveness and efficiency (Basu et al., 2017), particularly for confronting the upshots of economic crisis and difficult contexts such as pandemics (Morales-Sánchez & Pasamar, 2019; Salas-Vallina et al., 2021).

In recent decades, immense interest has been witnessed among scholars to elicit the antecedents of OCB (Salas-Vallina et al., 2021; Sun & Yoon, 2022). Likewise, Big-Five personality traits have continued to remain in focus (Anitha et al., 2024; Ilies et al., 2009; Shaffer et al., 2015) and conscientiousness trait has been consistently reported as the best correlate of OCB (Chiaburu et al., 2011; Pletzer et al., 2021). However, there is scant literature available on the said relationship in the context of healthcare (Debusscher et al., 2017; Konovsky & Organ, 1996; Koomson, 2021; Kumar et al., 2009; Lv et al., 2012), particularly in non-western cultures. Owing to its linkages with self-control, compliance, social responsibility, and commitment, conscientiousness is regarded as the most relevant personality trait in the context of healthcare predominantly for combating public health emergency situations like pandemics (Starcevic & Janca, 2022). High conscientiousness appeared to have had an exceptional adaptive value during the pandemic (Aschwanden et al., 2021). Despite the aforementioned, the extant literature has also indicated that the association between conscientiousness and OCB may possibly be negative in some contexts,

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thereby implying a high probability that boundary conditions impact the strength of relationship between conscientiousness and OCB (Meyer et al., 2009; Pletzer et al., 2021). Against this backdrop, the current study endeavored to assess the relationship between conscientiousness and OCB among healthcare professionals during COVID-19 pandemic. Further, it also attempted to explore the moderating effect of COVID-19-induced job stress on aforementioned relationship drawing upon the tenets of trait activation theory. According to the theory, personality traits are manifested in work behavior as a response to trait-relevant situational clues (Tett & Burnett, 2003). It further suggests that lack of trait activation diminishes trait-performance relationship (Judge & Zapata, 2015). Due to the changes in work context during pandemic, the most conscientious employees have been reported to experience higher levels of strain and low satisfaction, which is reverse of what was found in normal circumstances (Venkatesh et al., 2021). Hence, COVID-19-induced job stress, which is an extra organizational factor, may act as a barrier and weaken conscientiousness and OCB relationship among healthcare employees.

This study, therefore, offers a few contributions to the extant literature. First, it adds to studies that have analyzed conscientiousness–OCB relationships in social organizations including healthcare organizations, in a non-western cultural setting. Given that cultural differences can lead to varying behavioral outcomes at workplace, employees may demonstrate different levels of OCB directed at their co-workers or organization, particularly during the pandemic. Second, it contributes to the literature on personality traits and OCB by exploring the impact of a macro-level construct based on trait activation theory. To the best of our knowledge, no study has explored the moderating role of COVID-19-induced job stress on the aforementioned relationship. Third, this study gains relevance in the context of studies reporting the influence of COVID-19 in healthcare sector. In this regard, it highlights the effect of extra-organizational factors on performance of pro-social behaviors among healthcare professionals. By investigating these relationships, this study has addressed the scholarly calls for further investigations to gauge the impact of personality variables during such public health emergencies (Starcevic & Janca, 2022). Therefore, insights gained from this study are expected to prove beneficial for such countries where healthcare system is more fragile and prone to collapse during a calamity. Additionally, recognizing the role of conscientiousness in predicting positive extra-role behaviors during the COVID-19 pandemic can help public health authorities design personality-specific policies to effectively deliver services in future disease outbreaks.

## Literature Review and Hypotheses Development

### ***Organizational Citizenship Behavior***

Organizational citizenship behaviors refer to voluntary behaviors of employees that are not part of their contractual obligations and are seldom formally connected with organizational rewards but are useful in augmenting the overall effectiveness of organizations by encouraging a positive social and psychological environment (Organ, 1988; Rotundo & Sackett, 2002). Williams and Anderson (1991) categorized these

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pro-social behaviors into two broad forms, *OCBI* and *OCBO*. While former includes behaviors that provide direct immediate benefit to individuals and indirectly contribute to the organization, the latter includes behaviors that benefit organizations in general. Hence, employees displaying OCBs in any form are likely to add to organizational performance as these behaviors advance the flexibility required to perform job tasks through many unforeseen contingencies (Salas-Vallina et al., 2017; Smith et al., 1983).

### ***Conscientiousness***

Conscientiousness represents the propensity to be well-organized, meticulous, thorough, trustworthy, dependable, persistent, capable of holding their impulses in control, committed to goals, and achievement-striving (Digman, 1990; Phipps et al., 2015). Studies have revealed that conscientious employees display more positive attitudes toward goals than their less conscientious counterparts (Conner & Abraham, 2001), and do their tasks thoroughly (Kelly et al., 2003). A highly conscientious individual tends to go beyond minimum requirements and is highly dedicated to work (Witt et al., 2002). In fact, conscientiousness trait is a key factor triggering motivational processes (Barrick et al., 2002), thereby leading to better performance.

### ***Conscientiousness and OCB***

The extant literature on personality–OCB relationship has consistently supported conscientiousness as the best correlate of OCB (Anitha et al., 2024; Chiaburu et al., 2011; Organ & Ryan, 1995). Even the most recent meta-analytic studies (Pletzer et al., 2021; Zettler et al., 2020) have also corroborated this contention. Since strong work ethics and commitment to excellence are characteristic features of conscientious employees, hence they are inclined to engage in actions like offering assistance to co-workers, volunteering for additional responsibilities, and making extra efforts to meet organizational goals (King et al., 2005; Tripathi et al., 2023). Furthermore, owing to their characteristics of self-discipline and organization, they effectively manage their workload and look for opportunities to assist others. This way a conscientious employee can demonstrate and confirm a sense of identity as a competent person (Hogan & Holland, 2003). Additionally, conscientious employees approach their work in a proactive manner and look forward to potential issues, take initiative, and actively seek out chances to contribute in ways other than their assigned tasks. These characteristics fit well with extra-role behaviors like OCBs (Singh et al., 2017). Hence, one could interpret OCB as a manifestation of conscientiousness (Chiaburu et al., 2011). A highly conscientious employee has the natural tendency to go above and beyond their job obligations, and OCB provides them a platform to express this tendency either by providing benefit to a co-worker or to the organization (Chiaburu et al., 2011; Ilies et al., 2009; Raja & Johns, 2010).

Although most studies tend to generalize findings across various industries, there is a lack of healthcare-specific research that considers the unique challenges and work settings that healthcare professionals encounter (Debusscher et al., 2017;

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Koomson, 2021). Moreover, less research has been conducted in a non-western healthcare setting to understand the impact of conscientiousness on target-based OCBs (Koomson, 2021; Kumar et al., 2009; Lv et al., 2012). Given the paucity of resources and unprecedented heavy workload during the pandemic (Malik, 2022), OCB is a highly desirable behavior in healthcare settings (Leon & Brock Baskin, 2022). Promoting a culture of OCB within public hospitals is required because it may provide an opportunity to gain additional resources realized through extra-role behaviors (Bergeron et al., 2014). Similarly, many researchers have vouched for conscientiousness as having had an exceptional adaptive value during the pandemic (Aschwanden et al., 2021). In fact, conscientiousness has been considered as the most relevant personality trait for any public health emergency situation including pandemic (Starcevic & Janca, 2022). Several studies have investigated the linkages between conscientiousness and willingness to comply with various containment and mitigation measures (Aschwanden et al., 2021; Carvalho et al., 2020; Starcevic & Janca, 2022); however, there is a lack of attention towards studying the impact of this trait on extra-role organizational behaviors including OCBs. Consequently, it becomes more pertinent to gauge the influence of conscientiousness trait on OCB and its dimensions in public hospitals during COVID-19. Accordingly, we hypothesize that:

**Hypothesis 1 (H1):** Conscientiousness has a significant positive influence on OCB in public hospitals.

**Hypothesis 1a (H1a):** Conscientiousness has a significant positive influence on OCBI in public hospitals.

**Hypothesis 1b (H1b):** Conscientiousness has a significant positive influence on OCBO in public hospitals.

### ***Role of COVID-19-Induced Job Stress: A Trait Activation Theory Perspective***

Trait activation theory states that personality traits get expressed in work behavior as a response to trait-relevant situational clues, hence context or situation stimulates personality traits into action (Tett & Burnett, 2003). This theory focuses on individual–situation interaction and contends that behaviors are the outcome of such interactions (Lievens et al., 2006). Accordingly, employees are expected to gain intrinsic satisfaction from such work environment which permits an easy expression of their distinctive traits. It further suggests that lack of trait activation can diminish trait-performance relationship (Judge & Zapata, 2015; Tett & Burnett, 2003).

Recent studies (e.g., Ashiq et al., 2023; Durgun & Tayfun, 2023; Huang et al., 2023; Lima et al., 2020) revealed that healthcare employees who actively battle COVID-19 are prone to job stress, psychological distress, and other related mental issues. A number of reasons, for instance, extra workload, huge number of cases, dearth of certain medications, and feelings of being inadequately backed, have been cited in the literature that created stressful work environment (Durgun & Tayfun, 2023; Lima et al., 2020). Hence, within the hospital setting where such type of extra-organizational factor prevails, it is likely to have a detrimental impact

on these voluntary employee behaviors through their conscientiousness trait. Although conscientiousness is the most relevant trait to face any health emergency, conscientious employees are also expected to prioritize their task performance over contextual performance in this unprecedented stressful context. It may act as a constraint and weaken the aforementioned relationship. When employees perceive a high level of COVID-19-induced job stress, the association between conscientiousness and any form of OCB is expected to weaken and vice versa. Moreover, numerous scholars (e.g., Hough & Oswald, 2008; Snyder & Ickes, 1985) have also argued that situational strength can moderate the relationship between personality and work outcomes. The meta-analytic reviews (Meyer et al., 2009; Pletzer et al., 2021) also indicated that association between conscientiousness and OCB could possibly be reverse or negative in some contexts and circumstances, thereby indicating a high possibility that contextual moderators impact the strength of relationship between conscientiousness and OCB. In an attempt to address this knowledge gap, this study examines the pandemic-induced job stress as one such contextual moderator because the unprecedented job demands due to this extra-organizational factor have taken a greater toll on more conscientious employees which has resulted in reversal impact on various outcomes including high job strain and low satisfaction (Venkatesh et al., 2021). Hence, parallel to these arguments, it is hypothesized:

**Hypothesis 2 (H2):** COVID-19-induced job stress moderates the relationship between conscientiousness and OCB such that effect of conscientiousness on OCB is low when COVID-19-induced job stress is high.

**Hypothesis 2a (H2a):** COVID-19-induced job stress moderates the relationship between conscientiousness and OCBI such that effect of conscientiousness on OCBI is low when COVID-19-induced job stress is high.

**Hypothesis 2b (H2b):** COVID-19-induced job stress moderates the relationship between conscientiousness and OCBO such that effect of conscientiousness on OCBO is low when COVID-19-induced job stress is high.

## Methodology

### *Sample and Procedure*

This study was conducted among healthcare employees working across different public hospitals in Jammu & Kashmir, India. The total population under study was 7,151 healthcare professionals. Yamane's (1967) formula was utilized to determine the optimum sample size (Table 1). Subsequently, using a systematic random sampling technique, every fifth individual in the available list of employees was approached. The questionnaires were distributed through both online and offline modes. The respondents were asked to fill out and return the questionnaire at their convenience. The entire data collection process was executed between May and September 2021.

**Table 1**  
*Calculation of Sample Size and Sampling Interval*

Sample size ( <i>n</i> )	$\frac{N}{1 + N(e)^2}$ $= \frac{7151}{1 + 7151 (0.05)^2}$ $= 379$
Sampling interval ( <i>i</i> <sup>th</sup> term)	$n \div N * 100$ $= 379 \div 7151 * 100$ $= 5.29 \text{ or } 5 \text{ (rounded off)}$

Note. *N* = population size = 7151; *n* = sample size; *e* = Precision limit is 5% (convention within business, management, or social sciences research).

The demographic analysis revealed that our sample size of 379 respondents included 142 doctors, 169 nurses, and 68 paramedics. Moreover, our sample comprised of 42% males and 58% females; mostly respondents were in age group of 25–39 years (66.2%); most of them had completed their MD/MS/DNB/M.Sc. degrees (49.1%), and had below ten years of job tenure with their hospital (71.5%).

### **Measures**

The study has adopted well-established instruments to measure the constructs and all items were anchored to a 5-point Likert-type scale.

*Conscientiousness.* To assess conscientiousness among sample respondents, the study adopted items from Big Five Personality Inventory (John et al., 1991). The sample items include “I can do a thorough job” and “I persevere until the task is finished.”

*OCB.* The study assessed OCB via Lee & Allen’s (2002) scale. This scale consists of sixteen items, with eight items each for measuring OCBI and OCBO respectively. Sample items for OCBI include “I help others who have been absent”. Similarly, for OCBO “I attend functions that are not required but help the organizational image.”

*COVID-19-Induced Job Stress.* COVID-19-induced job stress was measured using adapted version of COVID-19-induced job stress scale (Montani & Staglianò, 2022) originally developed by Hochwarter et al. (2008) to measure stress induced by an extra-organizational stressful event. The sample items include “COVID-19 pandemic has caused me to work longer hours,” and “COVID-19 pandemic has made my work more demanding.”

### **Test for Common Method Bias**

To avoid common method bias (CMB), this study utilized certain procedural and statistical methods. Following Podsakoff et al. (2003), the anonymity and confidentiality of respondents were ensured and items were ordered to reduce priming effects while administering survey questionnaires. In addition, Harman’s single-factor test was executed using IBM SPSS to check this bias. Subsequently, after loading all the items onto a single factor, the total variance explained by the single factor was 29.435%, which is within the recommended threshold limit of 50% (Kock, 2015). Hence, it was concluded that CMB was not a serious issue in the data.

**Assessment of Normality**

The present study employed two most popular tests for assessing the normality of data, i.e., Kolmogorov-Smirnov with Lilliefors correction and Shapiro-Wilk tests (Steinskog et al., 2007; Thode, 2002). The results of both tests (Table 2) reported *p*-values for all the variables less than .05, which indicated that the data were not normally distributed. Consequently, PLS-SEM technique was used in the study because this modeling approach makes no distributional assumptions in computation of the model parameters (Wong, 2019).

**Table 2**  
*Tests of Normality Results*

	Kolmogorov–Smirnov <sup>a</sup>			Shapiro–Wilk		
	Statistic	<i>df</i>	<i>p</i> -value	Statistic	<i>df</i>	<i>p</i> -value
CJS	0.099	379	.000	0.959	379	.000
CONS	0.097	379	.000	0.959	379	.000
OCBI	0.097	379	.000	0.959	379	.000
OCBO	0.097	379	.000	0.959	379	.000
OCB	0.085	379	.000	0.954	379	.000

*Note.* <sup>a</sup> Lilliefors Significance Correction. CJS = COVID-19-induced job stress; CONS = conscientiousness; OCBI = organizational citizenship behavior towards individual; OCBO = organizational citizenship behavior towards organization; OCB = organizational citizenship behavior.

**Measurement Model Assessment**

To check for reliability and validity of scales, measurement model assessment was conducted using hierarchical component modeling (HCM) in SmartPLS 3 software. The conceptual model of the study comprised of two lower-order constructs viz., conscientiousness and COVID-19-induced job stress, and one higher-order construct viz., OCB. All these constructs were reflective in nature, therefore, following the recommendations of Hair et al. (2014), the measurement quality of these constructs was assessed. A disjoint two-stage approach was utilized to gauge the quality of OCB. Firstly, the measurement quality of lower-order components-OCBI and OCBO was assessed. Afterwards, an assessment of higher-order component-OCB was done on the relations between lower-order components and higher-order components (Becker et al., 2012; Peerzadah et al., 2024).

The initial lower-order model assessment revealed that the majority of factor loadings were above 0.7 threshold (Hair et al., 2018) while some loadings were below this cut-off. We deleted two items (Cov1 and Cov2) from COVID-19-induced job stress scale because loadings on these items were below 0.4 value and according to researchers (e.g., Hair et al., 2018, 2022), items with loadings below 0.4 should be deleted. Moreover, these experts have also suggested that items with loadings ranging between 0.4 and 0.7 can be retained only if average variance extracted (AVE) and composite reliability (CR) scores of constructs meet the recommended threshold values. There was no issue with CR score; however, the AVE score for



conscientiousness was below 0.50 value (Fornell & Larcker, 1981). Therefore, two items of conscientiousness scale (C4, C5) were also deleted. Consequentially, as shown in Table 3, Cronbach's alpha and CR values for all constructs exceeded the recommended level of 0.70 (Fornell & Larcker, 1981; Nunnally, 1975). Further, proof of convergent validity was provided by an acceptable level of AVE scores.

**Table 3**  
*Reliability and Convergent Validity of Constructs*

Constructs	Items	Loadings	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
CONS	C1	0.724	0.842	0.881	0.518
	C2	0.541			
	C3	0.779			
	C6	0.760			
	C7	0.832			
	C8	0.771			
	C9	0.589			
CJS	CJS3	0.500	0.769	0.856	0.607
	CJS4	0.891			
	CJS5	0.820			
	CJS6	0.843			
OCBI	OCBI1	0.648	0.895	0.916	0.580
	OCBI2	0.800			
	OCBI3	0.778			
	OCBI4	0.813			
	OCBI5	0.804			
	OCBI6	0.839			
	OCBI7	0.793			
	OCBI8	0.580			
OCBO	OCBO1	0.594	0.916	0.932	0.634
	OCBO2	0.803			
	OCBO3	0.786			
	OCBO4	0.804			
	OCBO5	0.835			
	OCBO6	0.854			
	OCBO7	0.844			
	OCBO8	0.822			
OCB	OCBI	0.912	0.788	0.904	0.825
	OCBO	0.905			

*Note.* CONS = conscientiousness; CJS = COVID-19-induced job stress; OCBI = organizational citizenship behavior towards individual; OCBO = organizational citizenship behavior towards organization; OCB = organizational citizenship behavior.

In addition, Heterotrait–Monotrait Ratio (HTMT) criterion was used to determine discriminant validity of each lower-order construct. It was found the HTMT scores for all the constructs (Table 4) were below threshold of 0.90 (Henseler et al., 2015), thereby evidencing their discriminant validity.

**Table 4**  
*Heterotrait–Monotrait Ratio (HTMT)—Stage I*

	CONS	CJS	OCBI	OCBO
CONS				
CJS	0.140			
OCBI	0.555	0.074		
OCBO	0.527	0.085	0.704	

*Note.* CONS = conscientiousness; CJS = COVID-19-induced job stress; OCBI = organizational citizenship behavior towards individual; OCBO = organizational citizenship behavior towards organization.

With respect to OCB–higher-order construct, we followed the same procedure that was utilized to examine the measurement quality of the lower-order constructs. Accordingly, factor loadings, Cronbach’s alpha, CR, AVE (Table 3), and discriminant validity (Table 5) were assessed. The results provided evidence for OCB being highly reliable and a valid construct.

**Table 5**  
*Heterotrait–Monotrait Ratio (HTMT)—Stage II*

	OCB	CONS	CJS
OCB			
CONS	0.649		
CJS	0.084	0.140	

*Note.* OCB = organizational citizenship behavior; CONS = conscientiousness; CJS = COVID-19-induced job stress.

**Structural Model Assessment and Findings**

Since adequate support was obtained for the measurement model, we proceeded further with hypotheses testing which comes under structural model assessment. To test the proposed hypotheses, a non-parametric bootstrap procedure was run with 5,000 subsamples (Hair et al., 2018). Results revealed that conscientiousness was having a significant positive impact on OCB. The bias-corrected confidence interval without zero in between also indicated a significant relationship. Moreover, the  $f^2$  value of 0.40 also indicated a large effect size (Cohen, 1988). Hence, H1 was supported (Table 6). It was further revealed that conscientiousness has a significant positive impact on OCBI and OCBO. Similarly, the  $f^2$  values of 0.324 and 0.292 respectively indicated medium effect size (Cohen, 1988). Therefore, H1a and H1b were also supported.

**Table 6**  
*The Structural Model Estimation*

Hypothesis	Coefficient	<i>t</i> - statistic	<i>p</i> -value	LLCI (Bc)	ULCI (Bc)	<i>f</i> <sup>2</sup> value	Decision
H1. CONS → OCB	0.537	11.203	0.000	0.449	0.608	0.400	Supported
H1a. CONS → OCBI	0.497	10.918	0.000	0.414	0.565	0.324	Supported
H1b. CONS → OCBO	0.477	9.468	0.000	0.384	0.549	0.292	Supported
H2. CONS*CJS → OCB	-0.145	2.199	0.014	-0.243	-0.130	0.028	Supported
H2a. CONS*CJS → OCBI	-0.142	1.384	0.083	-0.162	0.298	0.018	Not supported
H2b. CONS*CJS → OCBO	-0.151	2.190	0.014	-0.255	-0.132	0.028	Supported

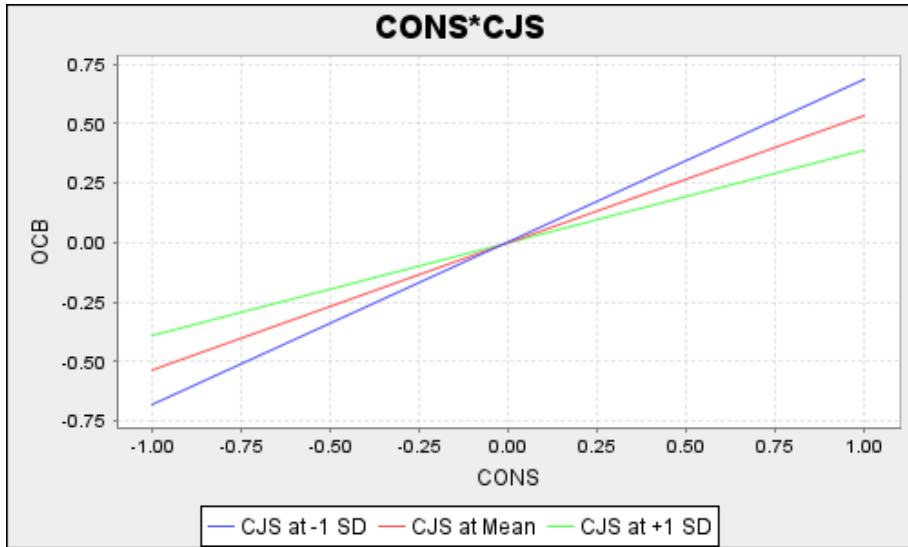
*Note.* LLCI = 95% Lower-level confidence interval; ULCI = 95% Upper-level confidence interval; Bc = bias corrected; CONS\*CJS = interaction term of conscientiousness and COVID-19-induced job stress.

The results of tests of the moderating effect of COVID-19-induced job stress on the relationship between conscientiousness and OCB revealed a significant negative moderation effect. Additionally, bias-corrected confidence interval without zero in between extended support to our hypothesis (H2). The *f*<sup>2</sup> value of 0.028 indicated a small effect size (Cohen, 1988). However, Aguinis et al. (2005) strongly suggested that moderators with even small effect size cannot be ignored. Therefore, H2 was also supported. Furthermore, the results also revealed a significant moderating effect of COVID-19-induced job stress on conscientiousness and OCBO relationship (H2b). While, in case of conscientiousness and OCBI, the results were found insignificant. Therefore, H2a was not supported in the study.

Figure 1 depicts the significant interaction effect of conscientiousness and COVID-19-induced job stress on OCB at mean and  $\pm 1$  standard deviation. At mean level, the effect of conscientiousness on OCB was positive, however, as COVID-19-induced job stress increased (+1 SD), the positive effect became less steep, indicating the positive effect weakened. Similarly, when COVID-19-induced job stress decreased (-1 SD), the positive effect got strengthened. Likewise, Figure 2 depicts the significant interaction effect on OCBO. It is also evident that as COVID-19-induced job stress increased (+1 SD), the positive effect of conscientiousness on OCBO became less steep and vice versa. Hence, in both cases, the nature of interaction was disordinal.

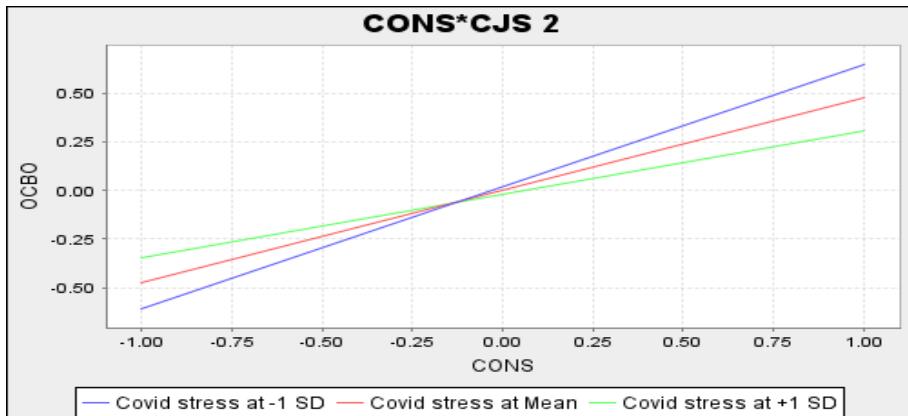
**Figure 1**

*Graphical Representation of Interaction Effect on Conscientiousness–OCB Relationship*



**Figure2**

*Graphical Representation of Interaction Effect on Conscientiousness–OCBO Relationship*



Moreover, to determine the robustness of the structural model, coefficient of determination ( $R^2$ ) was calculated. The  $R^2$  value for OCB was .288 (Table 7), hence it can be stated that variation in endogenous construct described by all exogenous constructs was substantial (Cohen, 1988). However, the introduction of moderating effect in the model produces a change in the model. COVID-19-induced job stress interaction reflects a change in  $R^2$  value from .288 to .307. This change is important

in analyzing the interaction effect (Hair et al., 2022). The  $R^2$  change of .019 indicated that with the addition of interaction term (CONS×CJS), the  $R^2$  has changed about by 1.9% (additional variance). Similarly, the  $R^2$  value for OCBO was .230 (calculated in lower lower-order model), which was above Falk and Miller's (1992) recommended value of .10. After adding the moderating term, the  $R^2$  values changed from .230 to .251, thereby indicating additional variance of 2.1%. The present study also used a blindfolding procedure to confirm the predictive relevance of the model. As depicted in Table 7, the calculated Stone-Geisser's ( $Q^2$ ) value meets the prescribed condition for predictive relevance ( $Q^2 > 0$ ).

**Table 7**  
*Coefficient of Determination ( $R^2$ ) and Predictive Relevance ( $Q^2$ )*

Construct	$R^2$ (before adding moderator)	$R^2$ (after adding moderator)	$Q^2$
OCB	.288	.307	.231
OCBI	.247	.261	.136
OCBO	.230	.251	.141

## Discussion

The current study has empirically tested the impact of conscientiousness on the display of OCB during pandemic among healthcare professionals in the Indian context. The results revealed that highly conscientious healthcare employees have a high tendency to get involved in positive extra-role behaviors even during pandemic. The results also revealed that conscientiousness trait had positively impacted both forms of OCB. This indicated that these conscientious employees tend to offer a helping hand to their colleagues and show genuine concern for their well-being even during hectic work schedules. Furthermore, they cared about the image and proper functioning of respective hospitals due to their basic tendencies of being well-organized, capable of holding impulses under control, committed to their goals, and achievement-striving. Hence, our findings have corroborated the extant studies (e.g., Chiaburu et al, 2011; Ilies et al., 2009; Kumar et al., 2009; Lv et al., 2012; Organ & Ryan, 1995; Pletzer et al., 2021; Zettler et al., 2020) which have found conscientiousness and OCB positively associated.

In an attempt to comprehend the role of boundary conditions on conscientiousness–OCB relationship, the current study explored COVID-19-induced job stress as the moderator. The results indicated that the interaction of conscientiousness and COVID-19-induced job stress negatively predicted employees' citizenship behaviors. In other words, COVID-19-induced job stress exerted a significant negative moderating influence on the aforementioned relationship, such that when COVID-19 induced job stress was more, conscientiousness–OCB relationship weakened and vice versa. Furthermore, the findings revealed that this relationship was negatively affected when the target of OCB was the organization. These findings are in line with assertion of trait activation theory which states that lack of trait activation can diminish trait-performance relationship (Judge & Zapata, 2015;

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Tett & Burnett, 2003). Hence, when the work environment was exceptionally stressful during the pandemic time, it did not allow for the easy expression of a healthcare worker's unique traits, due to which conscientiousness–OCB relationship got weakened. These findings are also supported by meta-analytic studies (e.g., Meyer et al., 2009; Pletzer et al., 2021) that have indicated the negative impact of certain circumstances or contexts on the aforementioned relationship. Similarly, Venkatesh et al.'s (2021) study has also revealed that the most conscientious employees of an organization have experienced higher levels of strain and low satisfaction because of the changes in work context during pandemic, which is reverse of what was found earlier. However, contrary to our assertion, this moderating effect was not significant in case of OCB directed towards individuals (OCBI). Since work orientation, self-control, discipline, and responsible behavior towards others are the key attributes of conscientious employees, they have been found highly adhere to prescribed guidelines and exhibited more hygiene behaviors during the pandemic (Aschwanden et al., 2020). These responsible behaviors might not have allowed this stressful work environment to significantly weaken their exhibition of helping behaviors toward their co-workers.

### Theoretical Implications

Following the extant literature, this study indicated a significant positive impact of conscientiousness trait among healthcare professionals, contributing largely towards their inclination to exhibit more OCBs. This study has added to the scant literature that has assessed the impact of personality factors for coping with such public health emergencies. Although several studies have investigated the linkages between conscientiousness and willingness to comply with various containment and mitigation measures (Aschwanden et al., 2021; Carvalho et al., 2020; Starcevic & Janca, 2022), there is a lack of interest in studying the influence of this trait on extra-role organizational behaviors including OCBs. By studying the aforementioned relationship in the Indian healthcare setting during the pandemic, the study has added to the pool of extant studies that have assessed the relationship in other contexts and cultures. Additionally, the findings have revealed a significant positive impact of conscientiousness on both forms of OCB, thereby addressing the concerns of whether OCB dimensions will have more or less similar antecedents in a non-western context (Daly et al., 2014). This study, moreover, advanced the literature by examining the conscientiousness–OCB relationship under boundary conditions of job stress induced by the COVID-19 pandemic. As aforementioned, COVID-19-induced job stress was incorporated as a moderator in the study model drawing upon Tett and Burnett's (2003) assumption of constraints in trait activation theory. Accordingly, the results revealed COVID-19-induced job stress as a significant constraint in work context that has diminished the activation of conscientiousness trait, thereby reducing its relevance to OCBs among healthcare employees. Hence, this study has extended its support to situation trait-relevance principle (Tett et al., 2021) and situation-strength effect (Judge & Zapata, 2015). On a broader level, this study has contributed to the domain of personality psychology by validating the assumptions of Trait Activation Theory in a novel context.

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## Practical Implications

The study results have several practical implications. The insights gained from the study can prove valuable for better healthcare management, particularly in crisis times like pandemic. Since the healthcare sector in India is already facing shortages of resources like inadequate staff, infrastructure, and medical supplies (Budhiraja et al., 2021; Malik, 2022), promoting a culture of OCB within healthcare institutions is required because it may provide an opportunity to gain additional resources realized through extra-role behaviors (Bergeron et al., 2014) and can also advance the flexibility required to carry out the tasks through many unforeseen contingencies (Smith et al., 1983). Towards that end, the study suggests the authorities give special consideration to conscientiousness during the selection process as the findings have found this trait as a strong predictor of OCB. In addition, it is also suggested to conduct such training sessions that aim at enhancing conscientiousness among the employees, to get more of such value-adding behaviors even in difficult situations. Since the findings have also revealed COVID-19-induced job stress weakening the positive impact of conscientiousness on OCB, the healthcare authorities, therefore, are suggested to organize stress management workshops at regular intervals to prepare these conscientious employees to face and manage extra-organizational stress factors like pandemic well in advance. Moreover, it is also suggested to regulate working hours for frontline healthcare professionals with an adequate period of physical and mental rest during a pandemic or similar kind of public health emergency to alleviate enormous stress levels. These suggestions may help in overcoming the detrimental impacts of highly stressful situations on the positive behaviors of these conscientious employees.

## Limitations and Future Research Avenues

The present study is also subject to certain limitations. The primary limitation pertains to design of the study: a cross-sectional research design was utilized instead of a longitudinal one, which limits the causality of the relationships. Although the data were collected from all three types of healthcare professionals, it was restricted to public hospitals in India. Another limitation pertains to potential risk of CMB. Notwithstanding that the study followed Podsakoff et al.'s (2003) procedural and statistical guidelines to avoid CMB, bias cannot be completely eliminated because the responses for all the constructs were self-reported. Furthermore, the present study has tested the predictive validity of general conscientiousness trait on OCB, while the narrower facets of this trait have not been taken into consideration. Facets refer to the components underlying the broad trait, for example, self-discipline, competence, dutifulness, and achievement-orientation in case of conscientiousness. Since facets can provide a more sophisticated comprehension of the role of a personality trait in applied settings (McAbee et al., 2014), hence future research can study the narrow facets instead of general conscientiousness trait. The present study, considering the unlikely recurrence of COVID-19 pandemic, urges future research to investigate how other stress-inducing factors like technological disruptions, work-life balance

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issues, and job insecurity, moderate the conscientiousness–OCB relationship among healthcare employees across different cultures.

## Conclusions

The current study has contributed to the budding research stream on the consequences of global pandemics on social institutions and individuals. It has addressed the scholarly calls for further investigations to gauge the impact of personality variables during such public health emergencies. In fact, exploring COVID-19-induced job stress as the moderator of personality–OCB linkage is a novel contribution to the extant literature. Based on the findings, it is suggested that healthcare authorities should give special consideration to conscientiousness trait in various HR practices and simultaneously focus on organizing stress management workshops at regular intervals. This can result in getting more of such value-adding pro-social behaviors even during natural calamities like a pandemic.

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