



# Dispositional causes of burnout, satisfaction, and performance through the fear of COVID-19 during times of pandemic

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## Abstract

Rooted in research into personality, we propose that the Big Five traits would be related to fear of COVID-19 (FOC), which in turn would lead to heightened job burnout, reduced job satisfaction, and decreased performance. Utilizing a three-wave time-lagged design, we collected our data from employees working in the United States and Canada ( $N = 300 \times 3$ ). We found good support for our hypotheses. Extraversion, neuroticism, and conscientiousness had significant direct effects on FOC. Fear of COVID-19 was positively related to job burnout and negatively related to job satisfaction and performance. Extraversion, neuroticism, and conscientiousness had significant indirect effects on burnout, job satisfaction, and job performance via FOC. Hence, this study identifies a key mechanism, an individual's worry about losing their valuable resources (e.g. their health, and that of their family members and friends, etc.), through which selected dimensions of personality might affect employees' work outcomes. We discuss our findings and provide suggestions for future research in this domain.

**KEYWORDS**

burnout, fear of COVID-19, job performance, job satisfaction, pandemic, personality

**INTRODUCTION**

On March 11, 2020, the World Health Organization declared the novel coronavirus as a global pandemic. Referred to as COVID-19, this acute infectious respiratory disease is mainly transmitted through contact with respiratory droplets. It has pervaded globally with more than 500 million infections and over 6 million deaths reported worldwide (World Health Organization, 2022). Not only has this virus threatened the health and psychological well-being of individuals worldwide (Van Bavel et al., 2020), it has also placed a heavy burden on jobs that provide services to the public (e.g. grocery clerks, drivers, workers in distribution centers, and food delivery businesses) (Rudolph et al., 2020). Together, these individual and professional concerns, uncertainty, and the constant fear of being affected by this dangerous virus are taking a heavy toll on the well-being of employees. It is quite plausible that the fear of COVID-19 (FOC), characterized by worrying about losing one's valuable resources (i.e. life and health of oneself, family members, friends, etc.) (Ahorsu et al., 2021), will not only affect an employee's ability to perform, but also result in burnout and reduced job satisfaction. However, people differ in their responses to stressful situations (Penley & Tomaka, 2002).

Research on personality suggests that the effects of individual traits on attitudes and behaviors are more likely to be visible when a situation is weak rather than strong (Mischel, 1968; Snyder & Ickes, 1985). A strong situation is defined as one that clearly provides cues relating to expected behaviors, generating consistency in behaviors, for example, a classroom setting, routine work, or clearly curable illnesses (Mischel, 1968; Snyder & Ickes, 1985). Individual reactions to such situations are usually similar. By contrast, a weak situation is considered ambiguous and unpredictable in terms of individual reactions (Mischel, 1968; Snyder & Ickes, 1985). Examples include complex work, social gatherings, and situations where people have little idea how to react. We perceive the COVID-19 pandemic as a weak situation as it was an unpredictable event that humankind was not prepared for. Across the globe, governments had no clear guidance on how to deal with the problem. In the absence of any concrete information, it took a long time for the World Health Organization to even agree on basic standard operating procedures (SOPs) to mitigate the spread of this deadly virus.

Against this backdrop, it is clear that the COVID-19 pandemic qualifies as a weak situation that would arouse different types of reaction from people with different personalities. Here, we utilize the more current trait activation theory that suggests people differ in their responses to situations depending on their individual traits (Tett & Burnett, 2003). Individuals adopt different attitudes toward risk (Zuckerman & Kuhlman, 2000), which may determine the extent of the fear and, ultimately, the burnout they experience due to the pandemic. Therefore, we believe it is useful to explore the dispositional causes of burnout, job satisfaction, and perceived performance due to FOC.

The concept of strong versus weak situations is not completely new. Murray (1938) argued that situations exert "press" on individuals to elicit reactions in trait-related ways. Mischel (1968) defined strong and weak situations more explicitly, suggesting that personality effects on behaviors are more pronounced in weak situations. Penley and Tomaka (2002) used this

concept to explain individuals' differing stress reactions based on their traits. Funder (2001) explained that context was an important factor missing in personality research, maintaining that personality relates to behaviors and attitudes based on context (Funder, 2001). Working along these same lines, Tett and colleagues proposed trait activation theory to explain how people with varied traits may differ in their responses to different situations (Tett et al., 2013; Tett & Burnett, 2003; Tett & Guterman, 2000). Traditionally, trait activation theory has offered an interactionist perspective, highlighting behavior as a function of the person and the situation (Tett & Burnett, 2003; Tett & Guterman, 2000). We argue that the global COVID-19 pandemic has affected every human being, and originally governments had no clear idea as to how to deal with this highly contagious and often fatal disease. Therefore, it is a weak situation that creates a great deal of ambiguity and anxiety. As this pandemic has a global impact, we use it as a fixed situational cue that impacts everyone, and which will elicit differing levels of fear and anxiety depending on an individual's traits. Hence, we use trait activation theory to explain how individual differences in personalities might vary in inducing FOC, ultimately eliciting negative work outcomes. To highlight the individual differences in personality, we utilize the five-factor model (FFM) of personality, one of the most widely used and well-established taxonomies of personality in research (Goldberg, 1990). Also referred to as the Big Five model (Goldberg, 1992), the FFM includes extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience (Costa & McCrae, 1992; John & Srivastava, 1999). This model enjoys strong support in the research community, and the five personality traits are associated with a wide array of behavioral and attitudinal outcomes. Research shows that the Big Five are related to outcomes such as job satisfaction (Judge et al., 2002), job performance (Mount & Barrick, 1998), job stress (Grant & Langan-Fox, 2007), job burnout (Alarcon et al., 2009; Swider & Zimmerman, 2010), work engagement (Rossier et al., 2012), counterproductive work behaviors (Bowling & Eschleman, 2010), relationship satisfaction (OMeara & South, 2019), leadership (Judge & Bono, 2000), and various health consequences (Jerram & Coleman, 1999).

Applying trait activation theory, we propose that personality will lead to outcomes such as burnout, job satisfaction, and perceived performance through FOC. This theory states that people are likely to differ in how they react to or cope with fear arising from the coronavirus pandemic, which in turn will determine how much burnout they experience, or how their job satisfaction and performance are affected (Pineles et al., 2009). Overall, we seek to make the following contributions to existing research. First, we apply the five-factor model of personality to elucidate that each of its dimensions may elicit a unique response to FOC resulting in work outcomes. Recent studies on the topic have examined various outcomes of FOC which are related to the outcomes we are studying. However, despite the similarity, the outcomes we are examining are different and warrant attention. For instance, one study highlights the mediation of FOC between personality profiles and perceived stress and sleep quality (Ahmed et al., 2021). Another investigation explicates that personality factors may predict more acceptance of COVID-19 containment measures (such as social distancing, handwashing, and disinfection), in turn promoting the avoidance of infection, distress and behavioral changes, fears, and concerns, thereby affecting opinions and beliefs (Al-Omiri et al., 2021). A third study reports that the Big Five personality traits are predictors of individual differences and changes in the perceived stressfulness of the COVID-19 pandemic. Caci et al. (2020) describe a moderated mediation model involving boredom, fantasy engagement, and perceived control of time between neuroticism and FOC. Although each of the abovementioned associations is important, our focus on burnout is more timely as it relates to depression, a pervasive concern during the pandemic (Lee et al., 2021). Second, in response to the need for more research into COVID-19 in Western

national contexts (Taylor et al., 2020), this study is relevant through its emphasis on employees working for North American organizations.

## THEORY AND HYPOTHESES

### Personality and the fear of COVID-19

Research into personality shows that people differ in how they respond to threatening and risky situations (Penley & Tomaka, 2002; Zuckerman & Kuhlman, 2000). Recent studies have shown that personality is related to a COVID-19 coping response (Volk et al., 2021), allowing room for conspiracy theories. Further, the pandemic situation is devoid of “consistency” as it fails to offer constant communication across various channels, thereby allowing individuals to make varied sense of the situation (Kniffin et al., 2021). Levying constraints, it prevents employees from exercising discretion over their lives (Šrol et al., 2021). Finally, it affects consequences by discouraging courses of action that increase the probability of positive outcomes or decrease the likelihood of adverse effects (Meyer et al., 2014). For instance, the increase in the use of the internet and social media channels has accentuated the amount of trolling and the sharing of fake news (Donthu & Gustafsson, 2020). Trait activation theory suggests that people are likely to react to an event such as a pandemic differently based on how it activates their traits (Tett & Burnett, 2003; Tett & Guterman, 2000). We believe that threat realization and how it is construed in terms of risk will largely depend on how a person feels that he/she is able to manage it. Individuals who are more resourceful, practical, and better at dealing with ambiguity would feel low levels of fear. Similarly, those who tend to have traits that are more risk-tolerant would be less fearful. On the other hand, individuals who tend to be high in risk aversion and who are less tolerant of ambiguity would experience greater fear and anxiety. The level of stress or burnout that an individual experiences due to the pandemic would depend on the level of fear it arouses in them. We therefore suggest that a relationship between personality and FOC exists based on how each type would encounter the anxiety, fear, and ambiguity associated with FOC. This fear will in turn translate into varying levels of burnout, job satisfaction, and perceived performance among individuals.

Individuals who are high in extroversion tend to be friendly, talkative, assertive, and active (Goldberg, 1990). They may be interested in pursuing excitement, novelty, and challenge (Clark & Watson, 1999). Following the logic of the Big Five personality model, extroverts like to engage with the world and tend to be risk-seeking (Pineles et al., 2009). For instance, one study highlighted social connectedness as a significant mediator between extraversion and perceived well-being (Lee et al., 2008). Extroverts also tend to have elaborate social networks that provide emotional support during times of distress. Having strong social needs and a high tolerance of risk and ambiguity, extraverted individuals are less likely to be readily fearful of the pandemic. We therefore expect that extraversion will be negatively related to FOC.

Neurotics tend to experience negative moods and emotions such as fear, sadness, embarrassment, anger, guilt, and disgust (McCrae & Costa, 2010). They are also inclined to be risk-averse and poor at coping with ambiguous situations (Garcia & Zoellner, 2017). The unpredictability and risk associated with COVID-19 may prompt fear and anxiety among neurotic employees. Recent research conducted during the COVID-19 pandemic confirmed this association, reporting that individuals with increased neuroticism displayed high levels of perceived threat due to COVID-19, leading to an increased negative affect (Kroencke et al., 2020).

Individuals high in agreeableness can be described as forgiving, sympathetic, and acquiescent (Rahafar et al., 2017). Agreeable employees avoid risk, conflict, and disagreements, can delay gratification, and are giving in nature with a genuine concern for others (McCrae & Costa, 2010). Highly agreeable individuals may be worried in situations that threaten them or their loved ones. Genuine concern for others and apprehension that a situation could impact everyone adversely is likely to activate a high level of fear among agreeable employees. Being less tolerant of risk, the risk-laden pandemic is also likely to arouse strong fear among people who are high in agreeableness.

Openness to experience encompasses originality, imaginativeness, and having an array of interests. This trait reflects intellectual engagement and an enjoyment of cognitive activity (DeYoung et al., 2014). Individuals high in openness to experience are risk-tolerant and are actually excited by novel situations (Kuo et al., 2016). They have a high tolerance of ambiguity and are not easily impacted by the fear of the unknown (Moghavvemi et al., 2017). Their inquisitive and curious nature allows them to do well in ambiguous and risky situations. They are more likely to find and adopt creative solutions in uncertain conditions (Volk et al., 2021), and on this basis, they are less likely to fear the coronavirus pandemic.

The conscientiousness domain includes carefulness, reliability, and hard work. Conscientious employees are highly organized, exhibiting self-control in social forums and living a well-structured life (Lecic-Tosevski et al., 2011). Although conscientious individuals tend to be risk-averse, they plan ahead and keep control of situations in order to deal with risk effectively. They tend to be resourceful and exhibit good performance across situations (Barrick & Mount, 1991). Conscientiousness is positively associated with performance, high job satisfaction, and low stress across situations (Raja & Johns, 2010). Being methodical, well-planned, and organized, conscientious individuals are predisposed to calmly assess and react to the pandemic. They are likely to strictly follow precautionary measures and take control of the situation to avoid any associated adverse effects. As a consequence, the personality dimension of conscientiousness might minimize their perceived threat of COVID-19 (Vollrath, 2001). Taken together, we propose the following hypotheses:

**Hypothesis 1.** Extraversion will be negatively related to FOC.

**Hypothesis 2.** Neuroticism will be positively related to FOC.

**Hypothesis 3.** Agreeableness will be positively related to FOC.

**Hypothesis 4.** Openness to experience will be negatively related to FOC.

**Hypothesis 5.** Conscientiousness will be negatively related to FOC.

## **Mediating role of FOC in the relationship between personality and outcomes**

We argue that the COVID-19 pandemic will have not only activated varying levels of fear among people based on their traits, but also lead to varying levels of burnout, job satisfaction, and perceived performance. Job burnout is conceptualized as a chronic stress syndrome and it is associated with lingering feelings of exhaustion, negative attitudes toward work (cynicism),

and reduced professional efficacy (Maslach et al., 2001). It is one of the most serious mental health issues organizations face (Maslach & Leiter, 2006). If left unchecked, it can lead to depression and physiological problems such as an increased prevalence of musculoskeletal disorders and cardiovascular diseases (Honkonen et al., 2006). Similarly, job satisfaction is one of the most effective indicators of vocational happiness (Zhang et al., 2014) and it refers to employees' attitudes toward the job itself or the relevant environment, and to their overall emotional response to their job roles (Ouyang et al., 2015). Finally, employees' job performance emphasizes the instrumentality of their individual involvement in achieving organizational goals. It is defined as the fulfillment of prescribed performance requirements related directly to the organization's main objectives (Demerouti et al., 2014). If employees think they are unable to fulfill the job requirements, this would be detrimental to both the employees and the organization.

People are likely to suffer from burnout in extremely threatening and exhaustive situations such as a global pandemic. In turn, this would reduce their job satisfaction and perceived performance levels. However, we believe that the way in which individual traits manifest as outcomes such as burnout, reduced job satisfaction, and diminished perceived performance will depend on the level of fear this situation activates. The level of fear activated among people based on how they react to the pandemic will determine the level of burnout they experience as well as the decline in their job satisfaction and perceived performance.

The current pandemic has disrupted people's lives as they worry about becoming seriously ill, transmitting the disease to their family and friends, or dying after being infected by the virus (Conway et al., 2020). In some instances, individuals with increased FOC have committed suicide because they thought they were infected, even though the subsequent autopsies proved otherwise (Goyal et al., 2020; Mamun & Griffiths, 2020). It is much the same on the professional front with employees feeling anxious about the sustainability of their jobs or anticipating financial losses. This is a situation that causes extreme stress and burnout. This inability to avoid thinking about the threat of coronavirus may challenge their organizational functioning (Thompson, 2020). For example, FOC might endanger employees' positive attitude toward their job (Ziegler et al., 2012). Instead, they may develop a negative evaluation of their work (Ilies & Judge, 2004) and fail to fulfill responsibilities to their organization. Such an extreme and threatening situation is also likely to reduce job satisfaction and perceived performance. Given the constant threat of coronavirus, employees may become emotionally exhausted, feel cynical, and lose confidence. Research shows that fear of losing one's life or that of a loved one can give rise to anxiety (Raja et al., 2020). It is logical to expect that FOC will lead to increased burnout among individuals. Hence, we may promote the following hypothesis:

**Hypothesis 6.** FOC will be positively related to burnout but negatively related to job satisfaction and job performance.

We propose a mediating process whereby personality will be related to burnout, job satisfaction, and job performance via FOC as people worry about becoming seriously ill, transmitting the disease to family or friends, or dying if infected with the virus (Conway et al., 2020). As explained earlier, we believe that the COVID-19 pandemic will arouse different levels of fear among people based on how they perceive, assess, and react to the situation. That fear will in turn translate into personal outcomes such as varying levels of experienced burnout, diminished job satisfaction, and lowered perceived performance based on their personality. Some researchers have shown a mediating role of FOC in the relationship between intolerance



of uncertainty and mental well-being (Satici et al., 2020), as well as depression (Voitsidis et al., 2020). Others have highlighted an association between health status, insomnia and mental health, and preventive behaviors through FOC (Ahorsu et al., 2021). A closely related study explicates the mediating role of perceived threat and efficacy between personality and perceived stress during the COVID-19 pandemic (Liu et al., 2021). In line with trait activation theory, we suggest that the uniqueness associated with each dimension of personality sensitizes/desensitizes it toward the perceived threat of COVID-19, which in turn affects employees' job-related outcomes. We therefore suggest the following hypothesis:

**Hypothesis 7.** Personality will be related to burnout, job satisfaction, and job performance through FOC.

## METHODS

We used a three-wave time-lagged data collection method for our study. This design not only allows us to avoid concerns of method bias, but it also supports better inferences of causality. Although not purely longitudinal, we believe this design is acceptable in relation to drawing causal inferences in situations where a longer time lapse in data collection could result in expected effects not being observed. Therefore, we maintained a minimum of a two-week gap between each data collection. Many studies using a time-lagged model have used similar time intervals for multi-wave time-lagged data collection involving similar variables (Dawson et al., 2015; Moreno-Jiménez et al., 2009; Raja et al., 2018). We collected the data between July and September 2020 from employees working for various organizations in North America. Following the approach suggested by Bartlett et al. (2001), we calculated the minimum sample size as 266, which is less than our sample size of 300, assuring us of the adequacy of our data.

We received ethics approval from the relevant ethics board at our university, which was in line with the lockdown protocols prohibiting any person-to-person interactions or onsite visits. Therefore, we collected the data through online administration of our surveys. We added at least two attention checks to rule out inattentive respondents (Gummer et al., 2021). First, we randomized survey items to avoid question order bias. Second, we reverse-coded items to ensure the respondents' attentiveness.

We utilized the services of an online market research company, Qualtrics (<https://www.qualtrics.com/>), which sourced the sample via website intercept recruitment, member referrals, targeted email lists, gaming sites, customer loyalty web portals, permission-based networks, and social media platforms, and so forth. Qualtrics used parameters such as the length of the survey, specific panelist profiles, and target acquisition difficulty to decide on the incentives offered to participants (e.g. cash, airline miles, gift cards, redeemable points, sweepstake entries, and vouchers, etc.). In order to collect the data, we uploaded our survey along with a letter onto the Qualtrics platform. We assured respondents of the strict confidentiality of their responses and informed them that their participation was purely voluntary. If they stopped participating at any time, they would not be penalized or lose any benefits to which they would otherwise qualify. As per Qualtrics' policy, their participation would be marked as incomplete and stored as partial data. To help protect the respondents' confidentiality, Qualtrics used a code to store their judgments. No identifying information was included in the surveys or other collected data. Qualtrics maintained all survey responses in its database by utilizing industry-standard firewalls and stringent information technology (IT) security policies and procedures. Furthermore, the

company kept track of specific respondent information such as response rate, abandonment rate, and so forth in private, with password-protected electronic files accessible to the researchers only. To tap the personality traits, the Qualtrics platform distributed our survey to 1004 individuals in the first round, to which 760 respondents (T1) answered questions about demographics and the Big Five personality traits, yielding a response rate of approximately 76%. After 2 weeks, we contacted these 760 respondents again and asked them to respond to a second survey that contained a measure of FOC. We received 567 responses (T2) that could be matched to their responses from the first round. This resulted in a response rate of 75% at this stage. Finally, after a gap of another 2 weeks, we sent out a third survey to measure burnout, job satisfaction, and job performance (T3). We received 300 responses that we were able to match to their first two responses, leading to a response rate of 53% at this stage. Given that we collected data during the pandemic, the matched response rate seems low (300/1004). Hence, we compared responses and non-responses on demographic variables (e.g. age and gender) across T1, T2, and T3. The analyses showed that there was no significant difference between those who completed the surveys at T1, T2, and T3 and those who dropped out during the process.

Fifty-five percent of our sample was men with an age range of 18–74 years, although the bulk of the respondents were in the 45–54 age group. The majority of the respondents worked for private sector organizations (52%) in healthcare, banking, telecommunications, education, and hospitality. Data for tenure indicated that 38% of the employees had been working for their current organization for 1–5 years, 35% for 6–10 years, and 27% for more than 10 years. We had a good range in terms of occupational level as 24% were from top-level management, 19% from middle-level management, and 57% from lower-level management. All the respondents had at least acquired high school education.

## Measures

We used established scales to collect the data relevant to the study variables. Unless otherwise specified, the scales used 5-point Likert anchors ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The variables were scored in such a way that a higher value referred to a high level of the variable in question.

## Personality

We used the 44-item Big Five Inventory (BFI: John et al., 1992) to tap the personality traits. In the BFI, eight items each tap extraversion (e.g. “is full of energy”) and neuroticism (e.g. “worries a lot”), nine items each measure agreeableness (e.g. “is helpful and unselfish with others”) and conscientiousness (e.g. “is a reliable worker”), and 10 items measure openness to experience (e.g. “is ingenious, a deep thinker”). The reliability coefficients for the five personality traits were .85 for extraversion, .88 for neuroticism, .81 for agreeableness, .78 for conscientiousness, and .82 for openness to experience. These internal consistency coefficients for the BFI scales are very similar to those reported for samples in the United States and Canada (John et al., 2008; John & Srivastava, 1999).



## Fear of COVID-19

We measured employees' perceptions of the threat of COVID-19 using the seven-item unidimensional Fear of COVID-19 Scale (FCV-19S; Ahorsu et al., 2021). We included statements such as "It makes me uncomfortable to think about coronavirus" and "My heart races or palpitates when I think about getting coronavirus." The Cronbach's alpha for this measure was .91. The one-factor confirmatory factor analysis (CFA) of Fear of COVID-19 (FCV-19) with the seven items yields an excellent fit ( $\chi^2 = 13.857$ ,  $df = 7$ ; confirmatory fit index [CFI] = .995; Tucker and Lewis Index [TLI] = .986; root mean square error of approximation [RMSEA] = .057). Moreover, the factor loadings (.579, .670, .849, .722, .864, .776, and .821) of all the items are greater than .50 and reach statistical significance ( $p < .01$ ). In addition, the magnitude of the average variance extracted (AVE = .712) is greater than .5 (Bagozzi & Yi, 1988), thus confirming the convergent validity of the scale (Anderson & Gerbing, 1988).

## Job burnout

We used the Maslach Burnout Inventory–General Survey (MBI-GS; Schaufeli et al., 1996)<sup>1</sup> to measure burnout. This is a three-dimensional 16-item measure that taps three core aspects of burnout syndrome, namely, exhaustion, cynicism, and professional efficacy. Overall burnout refers to heightened exhaustion, increased cynicism, and reduced professional efficacy. As suggested by the authors of the MBI survey, it is measured and analyzed at a dimensional level (Schaufeli et al., 1996). Sample items included "Working all day is really a strain for me" for exhaustion; "I have become less enthusiastic about my work" for cynicism; and "At my work, I feel confident that I am effective at getting things done" for professional efficacy. The internal consistency coefficients for emotional exhaustion, cynicism, and professional efficacy were .95, .88, and .88, respectively. Our observed ranges for Cronbach's alpha were similar to those reported by previous studies (e.g. Leiter et al., 2010; Wu et al., 2007).

## Job performance

We used self-reports to gauge the seven-item scale of performance advocated by Williams and Anderson (1991). Sample items included "I believe I adequately complete assigned duties" and "I can engage in activities that will directly affect my performance evaluation." The internal consistency coefficient was .84 for the performance measure.

## Job satisfaction

We assessed job satisfaction using a five-item scale (Brayfield & Rothe, 1951) frequently utilized in the literature (Saari & Judge, 2004). We asked the respondents to indicate the extent to which they agreed with statements such as, "At this very moment, I am enthusiastic about my work" and "Right now, I feel fairly satisfied with my present job." The value for Cronbach's alpha was 0.88.

## Control variables

Research suggests that age and gender can affect the variables under examination (Bajrami et al., 2020; Satici et al., 2020; Volk et al., 2021). Therefore, we controlled for these two variables in our study.

## RESULTS

### Tests of measurement model

The psychometric properties of the hypothesized 11-factor measurement model were evaluated by performing confirmatory factor analysis for ordinal indicators using the mean and variance adjusted weighted least squares estimator (WLSMV). Table 1 presents the global fit indices of alternative measurement models. Overall validity of an initial 11-factor measurement model was weak due to lower values of fit indices ( $\chi^2 = 5482.920$ ,  $df = 2794$ ,  $p = .000$ ,  $RMSEA = .057$  [90% CI: .055, .059],  $CFI = .906$ ,  $TLI = .901$ ). We found that several items had low standardized loadings: for example, the third item of cynicism, the second and fifth items of extraversion, the third item of conscientiousness, and the seventh and ninth items of openness to experience ( $\lambda = .406$ ,  $\lambda = .483$ ,  $\lambda = .435$ ,  $\lambda = .260$ ,  $\lambda = .190$ ,  $\lambda = .143$ ). These items were dropped, and the resulting model yielded slightly improved fit indices ( $\chi^2 = 4637.461$ ,  $df = 2359$ ,  $p = .000$ ,

TABLE 1 Alternative models

Model test	$\chi^2_{\text{WLSMV}}$	$p$	$df$	RMSEA	CFI	TLI
Eleven factor (Big five traits as five factors, Fear of COVID-19 as sixth factor, and Job Performance, Job Satisfaction, Emotional Exhaustion, Cynicism, and Professional Efficacy as remaining five factors)	<b>4642.553</b>	<b>.000</b>	<b>2359</b>	<b>.057</b>	<b>.919</b>	<b>.915</b>
Nine Factor (Big five traits as five factors, Fear of COVID-19 as sixth factor, Job Performance and Job Satisfaction as seventh and eighth factors, and combined Emotional Exhaustion, Cynicism, and Professional Efficacy as ninth factor)	6326.510	.000	2378	.075	.860	.854
Seven Factor (Combined Big five traits as first factor, Fear of COVID-19 as second factor, and Job Performance, Job Satisfaction, Emotional Exhaustion, Cynicism, and Professional Efficacy as remaining five factors)	6438.739	.000	2393	.075	.857	.851
Three Factor (Big five traits as first factor, Fear of COVID-19 as second factor, and Job Performance, Job Satisfaction, and Burnout dimensions as third factor)	8203.307	.000	2411	.090	.795	.789
One Factor	12,628.469	.000	2414	.119	.638	.628

Note:  $n = 300$ . Retained model indices shown in bold.

Abbreviations: CFI, Confirmatory Fit Index; RMSEA, root mean square error of approximation; TLI, Tucker–Lewis index; WLSMV, mean and variance adjusted weighted least squares.

TABLE 2 Inter-factor polychoric correlations

	AVE	$\Omega$	1	2	3	4	5	6	7	8	9	10
1. Extraversion	.490	.87										
2. Agreeableness	.410	.86	.501***									
3. Conscientiousness	.514	.89	.436***	.653***								
4. Neuroticism	.551	.91	-.500***	-.684***	-.535***							
5. Openness to experience	.544	.90	.713***	.485***	.453***	-.307***						
6. Fear of COVID	.712	.95	.118*	-.144**	-.266***	.289***	.096					
7. Perceived Performance	.758	.94	.288***	.504***	.715***	-.369***	.354***	-.359***				
8. Job Satisfaction	.731	.93	.409***	.530***	.433***	-.521***	.327***	-.297***	.559***			
9. Emotional Exhaustion	.818	.96	-.158**	-.299***	-.180**	.516***	-.097	.418***	-.269***	-.698***		
10. Cynicism	.804	.94	-.250***	-.392***	-.344***	.479***	-.178**	.854***	-.440***	-.819***	.854***	
11. Professional Efficacy	.669	.92	-.312***	-.495***	-.613***	.457***	-.329***	.262***	-.798***	-.641***	.262***	.449***

Note:  $N = 300$ .

Abbreviations: AVE, average variance extracted;  $\Omega$ , omega reliability.

\* $p \leq .05$ .

\*\* $p \leq .01$ .

\*\*\* $p \leq .001$ .

$RMSEA = .057$  [90% CI: .054, .059],  $CFI = .919$ ,  $TLI = .915$ ). This model was a better fit with the data compared with its alternative models reported in Table 1.

Common method bias was not a serious concern for the results as the method factor obtained by running a single factor confirmatory factor analysis (cf. Podsakoff et al., 2012) had poor fit indices ( $\chi^2 = 12628.469$ ,  $df = 2414$ ,  $p = .000$ ,  $RMSEA = .119$ ,  $CFI = .638$ ,  $TLI = .628$ ). Convergent validity and construct reliability are used to assess construct validity (Hair et al., 2019). Average variance extracted (AVE: Fornell & Larcker, 1981) was used to evaluate the convergent validity of the 11 variables, as reported in Table 2. The AVEs of all variables except extraversion and agreeableness were greater than .50 (AVE = .490, AVE = .410). The Omega coefficient ( $\Omega$ ) was used to evaluate the inter-item reliability of the 11 variables, as highlighted in Table 2. The Omega reliabilities of all variables were greater than .70. Taken together, these results provided support for construct validity of the 11 variables. The discriminant validity of the variables was assessed via a chi-square difference test of every pair of variables.

Table 2 reports the inter-factor polychoric correlations. Extraversion was positively correlated to fear of COVID-19 ( $r = .118$ ,  $p < .05$ ). Neuroticism was positively correlated to fear of COVID-19 ( $r = .289$ ,  $p < .001$ ). Agreeableness was negatively correlated to fear of COVID-19 ( $r = -.144$ ,  $p < .05$ ). Openness to experience was not correlated to fear of COVID-19 ( $r = .096$ ,  $p > .05$ ). Conscientiousness was negatively correlated to fear of COVID-19 ( $r = -.266$ ,  $p < .001$ ). Fear of COVID-19 was positively correlated to emotional exhaustion ( $r = .418$ ,  $p < .001$ ), cynicism ( $r = .854$ ,  $p < .001$ ), and professional efficacy ( $r = .262$ ,  $p < .001$ ). Fear of

TABLE 3 Discriminant validity

Factor pairs	2-factor MCFA $\chi^2$ (df)	1-factor MCFA $\chi^2$ (df)	$\Delta\chi^2$ ( $\Delta df$ )	Discriminant validity
1. Agreeableness and Conscientiousness	776.655*** (118)	1105.611*** (119)	328.956** (1)	Supported
2. Agreeableness and Neuroticism	759.885*** (118)	1092.965*** (119)	333.08** (1)	Supported
3. Extraversion and Openness to Experience	363.616*** (76)	706.389*** (77)	342.773** (1)	Supported
4. Job Performance and Conscientiousness	324.534*** (64)	645.468*** (65)	320.934** (1)	Supported
5. Job Satisfaction and Emotional Exhaustion	404.942*** (34)	773.274*** (35)	368.332** (1)	Supported
6. Cynicism and Fear of Covid-19	229.702*** (43)	1082.361*** (44)	852.659** (1)	Supported
7. Cynicism and Job Satisfaction	407.131*** (26)	570.953*** (27)	163.822** (1)	Supported
8. Cynicism and Emotional Exhaustion	175.317*** (26)	451.120*** (27)	275.803** (1)	Supported
9. Professional Efficacy and Job Performance	163.780*** (43)	430.545*** (44)	266.765** (1)	Supported

\*\* $p < .01$ . \*\*\* $p < .001$ .

COVID-19 was negatively correlated to job satisfaction ( $r = -.297, p < .001$ ) and job performance ( $r = -.359, p < .001$ ).

Table 3 presents the results of the chi-square difference test for the pair of variables with too high correlations ( $r > .70$ ). We found significant chi-square differences between these variables, providing evidence of their discriminant validity.

## Tests of structural model

We tested our hypotheses using structural equations modeling in MPlus (Muthén & Muthén, 2017). The results of the main effects of personality on FOC and the effects of FOC on outcomes are shown in Table 4. The results show that, contrary to Hypothesis 1, extraversion was positively related to FOC ( $\beta = 0.560, p = .000$ ). In line with Hypothesis 2, neuroticism was positively related to FOC ( $\beta = 0.301, p = .000$ ). Both agreeableness and openness were not related to FOC ( $\beta = 0.162, p = .197$ ;  $\beta = -0.025, p = .780$ ), so Hypotheses 3 and 4 were not supported. Conscientiousness was negatively related to FOC ( $\beta = -0.283, p = .000$ ), which supports Hypothesis 5. As predicted in Hypothesis 6, FOC was positively related to exhaustion ( $\beta = 0.396, p = .000$ ) and cynicism ( $\beta = 0.327, p = .000$ ), but, in contrast to Hypothesis 6, it was

TABLE 4 Unstandardized direct path coefficients of the hypothesized model

Hypothesis	Path	$\beta$	p
Controls	Gender → Emotional Exhaustion	0.332	.003
	Gender → Cynicism	0.163	.166
	Gender → Professional Self-Efficacy	0.053	.591
	Gender → Job Satisfaction	-0.053	.592
	Gender → Job Performance	0.145	.225
	Age → Emotional Exhaustion	-0.160	.001
	Age → Cynicism	-0.178	.000
	Age → Professional Self-Efficacy	-0.191	.000
	Age → Job Satisfaction	0.156	.001
	Age → Job Performance	0.178	.000
H1	Extraversion → Fear of COVID-19	0.560	.000
H2	Neuroticism → Fear of COVID-19	0.301	.000
H3	Agreeableness → Fear of COVID-19	0.162	.197
H4	Openness to experience → Fear of COVID-19	-0.025	.780
H5	Conscientiousness → Fear of COVID-19	-0.283	.000
H6	Fear of COVID-19 → Emotional Exhaustion	0.396	.000
H6	Fear of COVID-19 → Cynicism	0.327	.000
H6	Fear of COVID-19 → Professional Efficacy	0.132	.031
H6	Fear of COVID-19 → Job Performance	-0.259	.000
H6	Fear of COVID-19 → Job Satisfaction	-0.271	.000

Note:  $N = 300$ .

also positively related to professional efficacy ( $\beta = 0.132, p = .031$ ). In line with Hypothesis 6, FOC was negatively related to job performance ( $\beta = -0.259, p = .000$ ) and job satisfaction ( $\beta = -0.271, p = .000$ ).

The results of the mediation as recommended by Baron and Kenny (1986) are shown in Table 5. The indirect effects of extraversion ( $\beta = 0.222, p = .001$ ), conscientiousness ( $\beta = -0.112, p = .003$ ), and neuroticism ( $\beta = 0.119, p = .000$ ) on emotional exhaustion through FOC were supported. Similarly, the indirect effects of extraversion ( $\beta = 0.183, p = .003$ ), conscientiousness ( $\beta = -0.093, p = .003$ ), and neuroticism ( $\beta = 0.098, p = .003$ ) on cynicism through FOC were supported. The indirect effects of extraversion ( $\beta = 0.074, p = .044$ ), conscientiousness ( $\beta = -0.038, p = .046$ ), and neuroticism ( $\beta = 0.040, p = .048$ ) on professional efficacy through FOC were supported. The indirect effects of extraversion ( $\beta = -0.145, p = .006$ ), conscientiousness ( $\beta = 0.073, p = .006$ ), and neuroticism ( $\beta = -0.078, p = .011$ ) on job

TABLE 5 Unstandardized indirect path coefficients of the hypothesized model (H7)

Paths	Indirect effect $\beta$	$p$
Extraversion → Fear of COVID-19 → Job Performance	-0.145	.006
Agreeableness → Fear of COVID-19 → Job Performance	-0.042	.240
Conscientiousness → Fear of COVID-19 → Job Performance	0.073	.006
Neuroticism → Fear of COVID-19 → Job Performance	-0.078	.011
Openness to experience → Fear of COVID-19 → Job Performance	0.006	.781
Extraversion → Fear of COVID-19 → Job Satisfaction	-0.152	.002
Agreeableness → Fear of COVID-19 → Job Satisfaction	-0.044	.209
Conscientiousness → Fear of COVID-19 → Job Satisfaction	0.077	.002
Neuroticism → Fear of COVID-19 → Job Satisfaction	-0.082	.002
Openness to Experience → Fear of COVID-19 → Job Satisfaction	0.007	.779
Extraversion → Fear of COVID-19 → Emotional Exhaustion	0.222	.001
Agreeableness → Fear of COVID-19 → Emotional Exhaustion	0.064	.194
Conscientiousness → Fear of COVID-19 → Emotional exhaustion	-0.112	.003
Neuroticism → Fear of COVID-19 → Emotional exhaustion	0.119	.000
Openness to Experience → Fear of COVID-19 → Emotional exhaustion	-0.010	.777
Extraversion → Fear of COVID-19 → Cynicism	0.183	.003
Agreeableness → Fear of COVID-19 → Cynicism	0.053	.194
Conscientiousness → Fear of COVID-19 → Cynicism	-0.093	.003
Neuroticism → Fear of COVID-19 → Cynicism	0.098	.003
Openness to Experience → Fear of COVID-19 → Cynicism	-0.008	.777
Extraversion → Fear of COVID-19 → Professional Efficacy	0.074	.044
Agreeableness → Fear of COVID-19 → Professional Efficacy	0.021	.238
Conscientiousness → Fear of COVID-19 → Professional Efficacy	-0.038	.046
Neuroticism → Fear of COVID-19 → Professional Efficacy	0.040	.048
Openness to Experience → Fear of COVID-19 → Professional Efficacy	-0.003	.780

Note:  $N = 300$ .



performance through FOC were supported. Finally, the indirect effects of extraversion ( $\beta = -0.152$ ,  $p = .002$ ), conscientiousness ( $\beta = 0.077$ ,  $p = .002$ ), and neuroticism ( $\beta = -0.082$ ,  $p = .002$ ) on job satisfaction through FOC were supported. Overall, these findings support Hypothesis 7 in the cases of extraversion, conscientiousness, and neuroticism only.

## DISCUSSION

We hypothesized that personality would affect burnout, job satisfaction, and job performance due to fear of the COVID-19 pandemic. Using trait activation theory (Tett & Burnett, 2003), we found good support for our hypotheses in that personality predicted FOC, which in turn led to burnout, and reduced job satisfaction and job performance. Our study is unique in the sense that it examines the fear of coronavirus as a mechanism through which personality affects job outcomes. This extends our understanding of how people may differ in their responses to an extreme situation such as a pandemic.

While conscientiousness and neuroticism were related to FOC in expected directions, interestingly, extraversion was related to FOC in the opposite direction to our prediction. We expected extraversion to be negatively related to FOC, but the relationship turned out to be positive. In retrospect, it is plausible that the lockdowns and lack of social interaction with others have a huge impact on extraverted individuals. Research shows that extraverts are not very effective at controlling their environment, so they become distressed once the social aspect is removed (Abbott et al., 2008). Thus, the outward-facing, emotionally positive, energetic, socially focused, and assertive disposition of extraverts could be threatened by the social isolation and quarantine measures imposed during the COVID-19 pandemic. Therefore, the lack of social contact and the possibility that their loved ones could get sick possibly arouses heightened FOC among extraverts.

Our results indicate that, like extraversion, neuroticism leads to heightened FOC, while conscientiousness is negatively associated with fear of the pandemic. Given their propensity to be anxious, insecure, depressed, fearful, and nervous (Swider & Zimmerman, 2010), we found that neurotic employees are fearful of coronavirus based on their predisposition to negative feelings (Grillon et al., 2006). Conscientious individuals, on the other hand, tend to experience less FOC because they are methodical, well-organized, and confident. Our study also supports the assertion that personality predicts burnout, job satisfaction, and job performance through FOC. During the pandemic, when movement and social contact are restricted, and there is an increased risk to life, extroverted and neurotic employees may experience heightened FOC and consequently increased burnout, and reduced job satisfaction and job performance for different underlying reasons. The fear experienced by extraverted individuals may be rooted in the restricted freedom and perceived loss of friends or social environments in which they thrive. By contrast, people high in neuroticism may experience high FOC due to the anxiety and worry associated with it. They may feel that their worst fears are coming true and in turn may experience anxiety. Conscientious individuals, on the other hand, may be better placed to deal with such extreme situations and less likely to experience FOC or detrimental outcomes.

Our prediction regarding the relationship between personality and outcomes through FOC did not pan out well for agreeableness and openness to experience. It is difficult to explain the lack of relationships for these traits. However, in prior research, both agreeableness and openness to experience have often failed to exhibit an association with work-related attitudes and behaviors. Many studies have even dropped the two traits while examining the relationship

between the Big Five and work-related variables (e.g. Liu et al., 2021; Spark & O'Connor, 2020; Wismeijer & van Assen, 2008). One possible explanation could be that these traits may be related to work attitudes and behaviors under specific conditions suggesting the role of moderators.

## Limitations and future research directions

Despite interesting results, this study has some limitations which warrant attention. First, because we used a mono-source design that employs three measurement occasions, we must acknowledge that our investigation is not longitudinal. Precisely, our measurement of a within-subjects change in variables across three time periods does not explicitly allow us to make causal inferences. Our study did not use an instrument variable approach to predict changes in the dependent variables. More specifically, we did not systematically check the impact of a third variable such as socioeconomic status, job type, or availability of monetary and non-monetary resources (social and psychological) on the outcomes (Podsakoff et al., 2012). But given the nature of our variables, we believe reverse causality is not a concern. Theoretically, it is not plausible to expect that FOC or other outcomes would predict personality. Still, we would advise caution when interpreting the results of our study.

Second, we did not directly assess psychological vulnerability (Asmundson & Taylor, 2020), which may be the mechanism that connects the personality dimensions to FOC. Even though this mechanism is anchored in the well-established theories of personality, according to which employees who have a unique dimension of personality may or may not fear the coronavirus due to their unique sensitivity, further investigations could measure this mechanism directly. Third, our sample exclusively comprised employees in North America, which casts doubt on the generalizability of the results to other contexts. As the pandemic is a global phenomenon, it would be useful to undertake cross-country comparisons in future research to assess the prominence of personality dimensions in eliciting FOC and subsequent fluctuations in employees' work-related outcomes. Such contrasts could explain how different cultural factors influence the relative importance of this study's focal variables. Finally, Qualtrics endeavors to attract study participants using algorithms that may sometimes implement a systematic selection bias. We try to reduce such selection errors by adding screening questions that rule out respondents who are under the age of 18, retired, or who have left the workforce.

Future research could focus on narrow personality traits, such as locus of control, to see how people who believe that outcomes are in their control react differently to those who believe that outcomes are controlled by others or by fate. There is also scope to explore other mediators, such as emotional regulation skills (Hoyle & Sherrill, 2006) and intolerance of uncertainty (Carleton et al., 2016). This could help to explain how people may vary in their reactions to emergency situations such as a pandemic on the basis of their personality. Finally, diary-based research that taps the experiences of individuals on a daily basis would provide us with a better understanding of how personality affects fear and work outcomes.

## Practical implications

This study offers several important practical implications. During a pandemic, organizations should pay particular attention to individuals high in extraversion and neuroticism. Companies

could provide greater social support and put in place mechanisms that reduce employees' anxiety. Furthermore, while assigning people to work during emergency situations, they should rely on highly conscientious individuals to help better manage and provide help to others. Similarly, organizations should be careful about assigning frontline roles to neurotic individuals without proper support mechanisms in place. In the hiring and selection process, managers may regard high conscientiousness as a desired trait.

Organizations should also implement communication strategies and follow mental health recommendations to reduce FOC and help improve work-related outcomes (Fernández et al., 2020). To facilitate communication, detailed information relating to the prevention of COVID-19 should be provided. Managers may positively reframe COVID-19 to improve acceptance of its reality. This is important as COVID-19 is different from SARS and Ebola and may persist for a longer period of time (Zheng et al., 2021). To avoid employees experiencing negative outcomes, it may be worthwhile offering employee assistance programs (EAP) that include web-based cognitive behavioral therapy (CBT) and mindfulness-based therapy (MBT) through video conferences (Ho et al., 2020). These techniques challenge cognitive biases regarding risk perception; in fact, they teach relaxation techniques so employees can avoid low job satisfaction, decreased job performance, and burnout.

### CONFLICT OF INTEREST

There is no conflict of interest between authors.

### ETHICS STATEMENT

This research study received ethics approval from Brock University Research Ethics Board. We certify that we have complied with the APA ethical principles regarding research with human participants in the present investigation.

### REGISTRATION ON THE OPEN SCIENCE FRAMEWORK

[https://osf.io/f7w5d/?view\\_only=0f66a97fd0704f078c144c571dcdf465](https://osf.io/f7w5d/?view_only=0f66a97fd0704f078c144c571dcdf465)

### DATA AVAILABILITY STATEMENT

Data are available on request from the authors.

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### ENDNOTE

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