


ORIGINAL ARTICLE

Employees' fear at work, job crafting, and work engagement on a daily basis: The case for fear of COVID-19

Leonidas A. Zampetakis 

Department of Psychology, Applied Psychology Lab, University of Crete, Rethymnon, Greece

Correspondence

Leonidas A. Zampetakis, Department of Psychology, Applied Psychology Lab, University of Crete, Rethymnon 74100, Greece.

Email: zampetakis.leonidas@uoc.gr

Abstract

In the present study, we seek to understand how public sector employees that go to work to perform essential duties for the society and the economy cope with the fear of COVID-19 and maintain their motivation, energy, and enthusiasm for their work. We hypothesized that because employees are motivated to protect their health, an increase in daily fear of COVID-19 would be related to a daily increase in coping behaviors in the form of job crafting, which would consequently be related to employees' daily motivation. Data were based on 64 tenured employees working in public service organizations during the third wave of the COVID-19 pandemic (March 2021), who completed a quantitative diary for five consecutive workdays ($N = 320$ occasions). Results from multilevel analysis indicated that fear of COVID-19 had an indirect effect on work engagement through only one dimension of job crafting, seeking job resources. The study contributes to the ongoing theoretical extension of the beneficial role of job crafting by suggesting seeking social resources as an effective coping strategy for fear of COVID-19.

KEYWORDS

coping, daily diary study, fear of COVID-19, job crafting, seeking resources

INTRODUCTION

There is no doubt that the COVID-19 pandemic is a threatening and stressful event causing anxiety and fear to people worldwide (Rigotti et al., 2021). Coronavirus 2 (SARS-CoV-2) is invisible and contagious, and almost everyone is at risk of developing the disease (i.e., COVID-19) if exposed to the virus. Significant segments of the population have reported high levels of contagion concerns about one's self or family or friends becoming infected (Parlapani et al., 2020; Şimşir et al., 2021). As Ahorsu et al. (2020, p. 2) note, "... fear [of COVID-19] may amplify the damage of the disease itself." There is evidence that fear of COVID-19 is related to anxiety and stress (Ahorsu et al., 2020; Erbiçer et al., 2022), emotion suppression and somatic complaints (Troughakos et al., 2020), and lower job satisfaction and turnover intentions (Labrague & de Los Santos, 2021). Despite these findings, there is limited research on how employees who are physically present at their workplace during the pandemic to perform important tasks for society and the economy respond and cope with the fear of COVID-19 and maintain their motivation, energy, and enthusiasm for their work (Liu et al., 2021; van Zoonen & Ter Hoeven, 2021).

Fear is an intense negative emotion that stems from a perceived or actual threat to a person's well-being and compared with anxiety, fear has a clear and specific object (Ashkanasy & Dorris, 2017). In particular, fear of COVID-19 is threatening to employees because it can have serious consequences for their health and well-being (i.e., serious illness, hospitalization, and death). Because the discrete emotion of fear is considered a motivational state that protects people from actual or potential threats by redirecting their thoughts and actions (Izard, 1991; Lebel, 2017), we argue that employees may use job crafting behaviors on a day-to-day basis to proactively cope with fear of COVID-19 at work and remain engaged in their work roles.

Job crafting, that is, discretionary changes that employees initiate at work to optimize their work environment (Wrzesniewski & Dutton, 2001), has been conceptualized as a form of proactive coping behavior in the workplace that helps employees deal with increasing job demands and unpleasant conditions (Harju et al., 2016; Tims et al., 2013). When employees craft their jobs, they are likely to be more engaged with their work because they manage to succeed a better fit (Bakker & Oerlemans, 2019; Rudolph et al., 2017). Fear is an emotion that requires effort and mobilizes psychological resources (Roseman et al., 1990). We argue that the experience of fear of COVID-19 at work may have direct and indirect effects on employees' resource crafting behaviors and subsequently on their work engagement.

In the research presented herein, we consider fear of COVID-19 as a transient state that fluctuates within employees during the pandemic. Integrating tenets from the transactional model of stress (TMS; Lazarus & Folkman, 1987) and conservation of resources (COR; Hobfoll, 1989) theories, we develop and test a theoretical model that relates employees' fear of COVID-19, job crafting behaviors, and work engagement. In Figure 1, we present our theoretical model.

Our aim is to advance theory and research in the following ways. First, we conceptualize fear of COVID-19 as a day-level phenomenon within organizations that can fluctuate from day to day within employees. Most current research investigating fear of COVID-19 is cross-sectional (Erbiczer et al., 2022). Although such between-people approaches to the study of fear of COVID-19 are important, they can only explain how people differ from one another. Scholars have given little consideration to how employees experience fear of COVID-19 at work over time, neglecting states that relate to the dynamics of daily behavior. Thus, research on how daily fluctuations of fear of COVID-19 at work relate to daily job crafting behaviors needs investigation. Therefore, we provide an understanding of the dynamics of fear of COVID-19 within

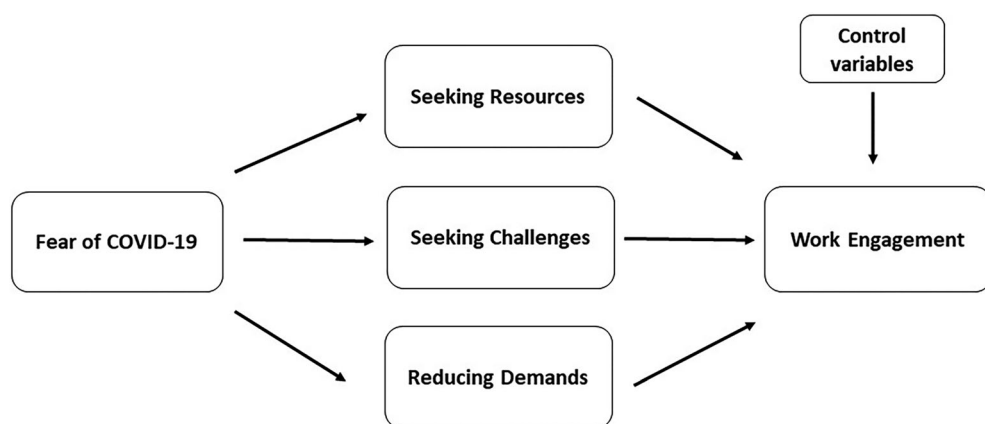


FIGURE 1 The proposed theoretical model of employees' fear of COVID-19 and work engagement

organizations (Kramer & Kramer, 2020). Second, we integrate TMS and COR theories to propose that daily job crafting is a plausible outcome of daily fear of COVID-19 at work. We extend previous research investigating the useful role of job crafting under conditions of increased demands (Petrou et al., 2012) to conditions of fearful situations (Tuckey et al., 2015). Furthermore, we add to the growing literature on the role of discrete negative emotions in promoting proactive behaviors at work (Lebel, 2017). Finally, the study adds insights to the literature on affect and emotions in general and the role of fear in particular in organizational settings (Ashkanasy & Dorris, 2017). Previous research concerning generally the role of fear at work refers primarily to employee silence, job loss and insecurity, unfair treatment, and psychological violence (Jordan et al., 2020; Oh & Farh, 2017). We extend this line of research by providing evidence about how can employees effectively cope with fear of COVID-19 at work.

Experiencing fear of COVID-19 at work

Fear of COVID-19 at work can be activated by environmental events and employees' direct interaction with the danger or by cognitively constructed causes (i.e., thinking, remembering, and imaging) (Erbiçer et al., 2022). Moreover, fear of COVID-19 could also arise indirectly from warnings of other people or mass media (Garfin et al., 2020). Compared with common hindrance stressors (i.e., red tape or role ambiguity), fear concerns perceptions of threat to well-being that captures primarily anticipated harm or loss to the self (Smith & Ellsworth, 1985; Tuckey et al., 2015). Lebel (2017) argued that fear occurs primarily in response to uncertainty in outcomes.

According to event system theory (EST; Morgeson et al., 2015), events characteristics like novelty, disruptiveness, criticality, and duration play important roles in how people think and act. For the COVID-19 pandemic, EST postulates that it is a strong event due to its novelty (different from other events from the past), its criticality (increased death rates around the world), its disruptiveness (lockdowns, different work procedures, and mandatory telework), and its duration (stated on March 2020) (Lin et al., 2021). Within the pandemic however, smaller in strength and duration, events (weak events) may also influence perceptions and behavior. For example, Zampetakis and Melas (2021) found that during the COVID-19 pandemic, the event of

localized lockdowns imposed on three big cities in Greece moderated the effects of perceived severity of the COVID-19 on employee intentions to vaccinate.

Imagine an employee, for example, working in a public service organization providing essential administrative service during the pandemic. Daily, she is likely to be confronted by various events eliciting fear from COVID-19 (i.e., a citizen or colleague entering the office without a protective mask, news about sudden spikes in coronavirus cases in the city, and conflicting information about the virus or the effectiveness of vaccines). As the pandemic unfolds, it is plausible that such events have already been encountered by the employee before; the novelty of the event by the employee is perceived as low. However, for each event, all the characteristics of the event are present to varying degrees (Morgeson et al., 2015). Although the event is perceived as having low novelty, it could affect the way the employee works that day (high disruption). Thus, even weak events during the pandemic may be perceived as threatening by employees.

During risky situations such as pandemic, fear is the primary response (Frijda, 2007; Izard, 2001). Specifically, COVID-19-related disruptions at work are likely experienced as less controllable and more uncertain by employees because COVID-19 is a global pandemic and not a man-made error or disruption. Thus, COVID-19-related disruptions at work are likely to lead to fear instead of anger, a negative emotion typically experienced when goals are blocked or frustrated (Schmitt et al., 2019).

Coping with fear of COVID-19 at work: Direct and indirect responses

Two theoretical approaches might be relevant for the proposed relationship between fear of COVID-19 and job crafting. The first is based on a process analogous to the TMS (Lazarus & Folkman, 1987), where indirect responses are expected implying controlled processing of the relevant event and the incorporation of cognitive appraisals. The second approach is based on the tenets of COR theory (Hobfoll, 1989; Hobfoll et al., 2018), according to which the focus is on the shared importance and the objective value of the threatened resource (i.e., health), implying a direct response of employees to the fear of COVID-19.

The TMS (Lazarus & Folkman, 1987) suggests an appraisal-based coping process. According to this approach, the experience of fear of COVID-19 is a system of appraisal, response, and adaptation of the specific situation in which employees find themselves in, and their goals. That is, when employees perceive an event that involves a coronavirus relevant risk to which they are susceptible and the risk is counter to their goal of maintaining their health and well-being, they tend to experience fear. A coping response is determined by two interrelated stages of appraisal: The first stage, primary appraisal, refers to the appraisal that the situation has personal relevance and significance to the employee in terms of his or her goals, values, and beliefs. The second stage is the secondary appraisal and is primarily concerned with how to cope an event that triggers fear.

COR (Hobfoll et al., 2018) is a motivation theory that focuses on peoples' resources, that is, the "things [people] centrally value" (Hobfoll et al., 2018, p. 106) or "anything perceived by the individual to help attain his or her goals" (Halbesleben et al., 2014, p. 5). People are motivated to protect their current resources (i.e., a resource conservation perspective). Health, family, and well-being are commonly valued resources (Hobfoll et al., 2018). Furthermore, when employees are threatened with resource loss, then, according to COR, they need to invest their limited resources to acquire additional resources (i.e., a resource acquisition perspective) (Halbesleben

et al., 2014). Although appraisal coping place emphasis on individual interpretations and resource-based coping place emphasis on the value of the threatened resource, it is plausible that employees may use both approaches to cope with fear of COVID-19.

Fear as a high activation and unpleasant emotion requires effort and mobilizes psychological resources (Roseman et al., 1990; Smith & Ellsworth, 1985). Fear for COVID-19 then may trigger the risk of serious health problems and, as such, create a condition for employees to initiate secondary appraisals to avoid potential loss (Hobfoll et al., 2018) and to proactively cope with this threat by crafting their job resources. Thus, when employees experience fear of COVID-19 at work, they are motivated to maintain their health status and invest their limited available resources in proactively crafting their job resources to gain further resources.

Although existing evidence suggest that fear in general and fear of COVID-19 in particular is related to lower job satisfaction and turnover intention (Labrague & de Los Santos, 2021; Peng et al., 2019), as a high activation and unpleasant emotion, it can also stimulate employee action and proactive behaviors within organizations (Fay & Frese, 2001; Lebel, 2017). Under this perspective, fear has a proactive potential in the sense that it can direct and enhance employees' efforts toward constructive actions to protect themselves or others from harmful situations (Lebel, 2017). This is especially true for employees who are physically present at work during the pandemic. According to Frijda (2007, p. 206), "fear presumably is felt most strongly when you cannot flee." To this end, voluntary, self-initiated employee behaviors such as job crafting appear to be a viable adaptive strategy.

Fear of COVID-19 and work engagement

Petrou and his colleagues (2012) empirically verified that within the job demands and resources (JD-R) theory (Demerouti et al., 2001), job crafting can be conceptualized as voluntary self-initiated employee behaviors consisting of three dimensions: seeking job resources, seeking job challenges, and reducing job demands. These three dimensions of job crafting can also be conceptualized as unfolding on a day-to-day basis (Petrou et al., 2012). Moreover, according to Mäkikangas (2018), job crafting behaviors are not mutually exclusive and can be used simultaneously.

Seeking job resources refers to increasing social resources by proactively "asking advice from colleagues or supervisors, or asking feedback on one's job performance" (Petrou et al., 2012, p. 1122). Through job resource seeking, employees try to increase their available resources in their work environment primarily to achieve goals or complete tasks (Demerouti et al., 2015), rather than their personal resources. For example, Demerouti et al. (2015) have shown that employees' seeking resources was positively related to self-reported job autonomy, an important job resource.

We expect a positive correlation between employees' fear of COVID-19 and seeking job resources across employees (at the between level) and from 1 day to the next (at the within level). At the between-person level, employees tend to engage in voluntary self-initiated behaviors when their working conditions are not optimal or when they encounter ambiguous and uncertain situations at work (Fay & Frese, 2001; Grant & Parker, 2009). According to JD-R (Demerouti et al., 2001), job resources enhance employee work motivation (e.g., Petrou et al., 2012). There is, thus, reason to expect that employees, who are physically present at their jobs during the pandemic and experience events that trigger fear of COVID-19, will be more likely to proactively seek to expand their pool of job resources to reduce uncertainty and cope

with feelings of low control. By acquiring job resources, employees are more likely to perceive fear of COVID-19-related events as easier and safer to cope with, thus, maintaining their motivation and performance (Van Emmerik et al., 2007). At the within level, we also expect that on days at work that employees experience more fear of COVID-19 eliciting events than usual, to report higher level of seeking job resources.

The second dimension of job crafting is seeking job challenges. Seeking job challenges refers to proactive behaviors such as “looking for new tasks at work once one finishes one's work or taking on more responsibilities” (Petrou et al., 2012, p. 1122). Empirical research suggests that when employees craft job challenges, they actually aim to refill their personal resources (i.e., their optimism or self-efficacy), and as such, crafting job challenges has the potential to diminish employees' uncertainty (Petrou et al., 2012; Vogt et al., 2016). For example, in a longitudinal study, Vogt et al. (2016) have shown that employees' seeking challenges behavior was positively related to their psychological capital (i.e., a construct encompassing, hope, optimism, resilience, and self-efficacy). Therefore, a positive relationship between fear of COVID-19 and seeking job challenges is expected, as employees might choose to invest their limited resources in challenging aspects of their work and, in turn, increase their personal resources (such as optimism). We also expect the positive relationship between fear of COVID-19 and seeking job challenges to hold both at within- and between-person levels.

Reducing demands is the third job crafting dimension. Reducing demands can include behaviors targeted “toward minimizing the emotionally, mentally, or physically demanding job aspects or reducing one's workload” (Petrou et al., 2012, p. 1123). Contrary to seeking resources and seeking challenges, which both imply secondary appraisals, fear can have more direct responses (Jordan et al., 2020). Fear is often related to avoidance behaviors or behavioral reactions associated with “flight” responses (Jordan et al., 2020; Lebel, 2017). Empirical evidence confirms the negative relationship between reducing demands and workload, that is, the number of tasks that an employee has to perform when at work (Demerouti et al., 2015; Petrou et al., 2012). Therefore, a positive relationship between fear of COVID-19 and reducing demands is also expected, as employees might choose to reduce their job demands as a direct response to the experienced fear and, thus, as a strategy to protect their health. We expect this positive relationship to hold both at within- and between-person levels.

Based on the above discussion, formally, we propose:

Hypothesis 1. Fear of COVID-19 relates positively to seeking job resources, seeking job challenges, and reducing job demands, both at (a) the between-person level and (b) the within-person level.

Because employees who craft their job manage to succeed a better fit, they are more likely to be more engaged in their work (Bakker & Oerlemans, 2019). Work engagement refers to a positive affective/motivational work-related state (Xanthopoulou & Bakker, 2021) and can be considered a stable disposition and/or a dynamic concept that varies among employees on a daily basis (Petrou et al., 2012; Xanthopoulou et al., 2009). Research suggests that basic psychological needs such as competence and autonomy are strengthened when employees engage in job crafting (Bakker & Oerlemans, 2019). Seeking resources and seeking challenges have also been found to relate positively to work engagement, whereas reducing demands behaviors are negatively related to work engagement (Petrou et al., 2016; Rudolph et al., 2017). This pattern of relationships has also been confirmed at the within-person level (Demerouti et al., 2015; Petrou et al., 2012). We propose that:

Hypothesis 2. Seeking resources and seeking challenges relate positively and reducing demands negatively to work engagement both at (a) the between-person level and (b) the within-person level.

Finally, we expect indirect effects of fear of COVID-19 on work engagement at both the between- and within-person levels. Employees who regularly experience events eliciting fear of COVID-19 at work are more likely to use proactive behaviors in the form of job crafting, which in turn relate to work engagement (between-person effects). We also expect the same pattern of results at the within level. Thus, we propose:

Hypothesis 3. An indirect, positive relationship exists between fear of COVID-19 and work engagement through job crafting, both at (a) the between-person level and (b) the within-person level.

METHODS

Procedure and sample

The study was part of a larger project and was carried out in accordance with the recommendations of the Research Ethics Committee at the University of Crete, Greece (REC approval code: 67/1105). Previous research has provided evidence on how employees in the healthcare (Liu et al., 2021) or tourism (Cheng et al., 2021) industries manage to remain engaged in their work roles during the COVID-19 pandemic. As far as we know, there is no research on how employees in administrative positions in the public sector remain engaged in their jobs during the pandemic. Toward this end, before administering the survey, we approached general managers from public organizations (local governments and public sector enterprises) by sending an email that explained the study purposes and requested permission to survey their employees. Managers who gave consent were sent a link to a website that described the purpose of the study and interested employees could participate by providing an email. A prerequisite for participation was employees to have tenure, physical presence at work (not teleworking) and perform essential tasks, during the study.

Initially, 131 employees were interested to participate. To encourage participation, we offered feedback on the study's results, while voluntary participation and anonymity was also guaranteed. After excluding (a) 16 participants who dropped out during the second day and (b) 11 participants that were teleworking, our final sample comprised 64 employees (response rate 48.9% from 131).

The initial email to interested employees contained a cover letter with a term of informed consent and a separate page with the purpose of the study, definitions of the main variables, and instructions for creating unique identification numbers (combination of birthday, mobile phone number, and first letters of participants' name and surname) to ensure anonymity of participants and link successive diary responses to specific respondents. A link to a secure website was provided and respondents were asked to complete a single baseline survey. After that, participants were sent a day-specific questionnaire link to complete a diary questionnaire (for five consecutive working days), after the end of the working day and before returning home.

Mean age of participants was 30.37 years ($SD = 7.83$ years, range 21–54 years), 36% were women, and 17% had managerial roles in the organization. Participants worked, on average,

40.03 h/week ($SD = 5.51$ h) and had 9.04 years of tenure ($SD = 7.44$ years, range 2–31 years). Fifty-one participants (79.7%) had a bachelor's or equivalent degree and 7.81% of participants had a master's degree or a PhD. The remaining participants completed a secondary school/higher education school certificate.

Measures

Baseline questionnaire

The baseline questionnaire included demographic questions (gender, age, education, working hours per week, tenure, and managerial position) and measures of participants' general levels of job pressure and dispositional optimism.

Dispositional optimism

To assess the general level of participants' optimism, we used the three items from the Life Orientation Test-Revised (LOT-R; Scheier et al., 1994), with a general timeframe. Responses to items were made on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Cronbach's alpha for the three items was .65. Trait optimism was defined as the mean response to all three items.

General job pressure

To assess employees' general pressure at work, we adopted four items of job-related stressful events from the Job Stress Survey (Spielberger & Reheiser, 1994). Respondents were asked to indicate how often (in days) each stressor occurred during the last 6 months, using a 10-point scale from 0 to 9 or more, and they had personally experienced this event. The four items used were: "Frequent changes from boring to demanding activities," "Excessive paperwork," "Meeting deadlines," and "Insufficient personal time (e.g., coffee breaks and lunch)." Alpha coefficient ($\alpha = .72$) indicated acceptable reliability for the four items. Job pressure was defined as the mean response to all four items.

Daily questionnaire

The diary questionnaire consisted of five identical questionnaires, one for each workday, and included questions about employees' daily fear of COVID-19, daily job crafting, and daily work engagement. For the daily multi-item measures, we calculated McDonald's omega (ω) coefficient of within subjects change.

Daily work engagement

We used six items from the Utrecht Work Engagement Scale (Schaufeli & Bakker, 2004) (two items from each one of the three dimensions: daily vigor, daily dedication, and daily absorption). Participants rated these statements on a 5-point Likert scale (1 = *did not apply to me today* to 5 = *totally applied to me today*). The one-factor multilevel confirmatory factor analysis (MCFA) showed a reasonable model fit: χ^2 ($df = 53$) = 387.21, $p < .001$; CFI = .939; RMSEA = .063; and $SRMR_{\text{Within}}/SRMR_{\text{Between}} = .022/.059$. The three-factor model showed a better fit to the data, $\Delta\chi^2$ ($df = 6$) = 42.25, $p < .001$. Nevertheless, as in the studies of Petrou

et al. (2012) and Xanthopoulou et al. (2009), we were primarily interested in total daily work engagement rather than individual dimensions. Omega (ω) coefficient ($\omega_{\text{between}} = .94$, $\omega_{\text{within}} = .87$) indicated acceptable reliability for the six items. Daily work engagement was defined as the mean response to all six items. We calculated the intraclass correlation coefficient (ICC) of daily work and found .61, indicating that 61% of the total variance in work engagement was a between-person variation, whereas 39% lay within-persons, which corresponds to results from previous diary studies (Petrou et al., 2012; Xanthopoulou et al., 2009).

Daily job crafting

We adopted the three scales of job crafting developed by Petrou et al. (2012), namely, seeking job resources (“I have asked colleagues for advice”), seeking job challenges (“I have asked for more responsibilities”), and reducing job demands (“I have tried to ensure that my work is emotionally less intense”). Petrou et al. (2012), using results from confirmatory multilevel factor analyses, combined the dimensions of increasing structural and social job resources, as originally operationalized in Tims et al.’s (2013) job crafting scale into one dimension, seeking job resources. We removed the item “I have tried to learn new things at work” that according to Tims et al. (2013) refers to increasing structural resources. The remaining three items refer actually to increasing job social resources. Respondents were asked to indicate if they engaged in several behaviors by the end of the working day on a 5-point Likert scale (1 = *did not apply to me today* to 5 = *totally applied to me today*). Previous research has shown acceptable psychometric properties for the Greek version of the scales (Zampetakis, 2021). The three-factor MCFA resulted in an acceptable overall fit: χ^2 ($df = 164$) = 305.33, $p < .001$; CFI = .952; RMSEA = .052; and SRMR_{Within}/SRMR_{Between} = .028/.069. The three-factor model, at both levels, had a better fit to the data compared with a model in which all items loaded on one factor: $\Delta\chi^2$ ($df = 23$) = 3338.84, $p < .001$. Omega coefficients for daily seeking job resources ($\omega_{\text{between}} = .63$, $\omega_{\text{within}} = .77$), daily seeking challenges ($\omega_{\text{between}} = .82$, $\omega_{\text{within}} = .92$), and daily reducing demands ($\omega_{\text{between}} = .67$, $\omega_{\text{within}} = .89$) indicated acceptable reliability. Daily seeking resources, daily seeking challenges, and daily reducing demands were defined as the mean response to their respective items. For job crafting behaviors, ICC showed that 62% of the variance in seeking resources, 58% in seeking challenges, and 40% in reducing demands were attributed to between-persons variations (in line with the research of Demerouti et al., 2015, and Petrou et al., 2012).

Daily fear of COVID-19

We adopted three items from the original fear of COVID-19 scale (FCV-19S) developed by Ahorsu et al. (2020). In the Greek language, the scale was adapted by Tsiropoulou et al. (2020). The three items used were: “Today at work, it made me feel uncomfortable to think about coronavirus-19,” “Today at work, I was afraid about getting coronavirus-19,” and “Today at work, when reading news and stories about coronavirus-19 on social media and from colleagues, I became nervous or anxious.” Participants rated these statements on a 5-point Likert scale (1 = *did not apply to me today* to 5 = *totally applied to me today*). The one-factor MCFA resulted in an excellent model fit: χ^2 ($df = 9$) = 3.25, $p > .05$; CFI = .999; RMSEA = .001; and SRMR_{Within}/SRMR_{Between} = .001/.004. Omega (ω) coefficient ($\omega_{\text{between}} = .91$, $\omega_{\text{within}} = .81$) indicated acceptable reliability for the three items. Daily fear of COVID-19 was defined as the mean response to three items. Daily fear of COVID-19 had an ICC value of .67, meaning that 33% of the total variance was within-person and indicating that fear of COVID-19 varied substantially from day to day.

Control variables

We controlled for respondents' age (in years), hours working per week, educational level (0 = school/higher education certificate, 1 = bachelor's degree, 2 = master's degree/PhD), managerial position (0 = no, 1 = yes), and tenure (in years), at the between-person level. Previous research suggests that older employees tend to focus more on the positive aspects of their job and experience higher work engagement than younger employees (Kim & Kang, 2017). Previous research also suggests that differences in managerial roles, educational level, and tenure may affect work engagement from the perspective of different resources and demands (Ng & Feldman, 2009). We controlled for employees' general levels of job pressure. Employees not teleworking during the pandemic have to manage several constraints due to increased regulations and red tape and increased workload. Some studies have suggested that a negative relationship exists between job stress (Rothmann, 2008) with work engagement. We also controlled for dispositional optimism, because it is considered an important personal resource correlating positively to work engagement (Xanthopoulou et al., 2007, 2009).

Within persons, we controlled for time (i.e., the day of the week—Monday to Friday) to rule out confounding of within-person relationships with linear trajectory changes.

General analytical approach

Our data have a hierarchical structure (Level 1—daily data, nested within individual employees—Level 2) with 320 occasions (5 observations per respondent \times 64 respondents). Due to the hierarchical structure, we used the general framework for multilevel mediational analyses proposed by Preacher et al. (2010). Under this methodological approach, each observed variable at Level 1 is partitioned into a between-person and a within-person component. Specifically, we person mean centered all Level 1 variables (except time) to remove between-person variation. We used person means for the Level 2 variables. With this procedure, we separated daily variation and estimates of within-person effects from more stable person effects (i.e., between-person effects) (Hoffman, 2015). The dependent variable of our study and between-person control variables remained uncentered (Antonakis et al., 2021). The proposed mediational models were estimated with fixed effects (random intercept models) with the Stata (v.15) software and the maximum likelihood (ML) estimator.

We applied manifest variables to simplify the analyses. MCFAs and reliability analyses were conducted to provide statistical evidence to support the application of manifest variables. Furthermore, we established discriminant validity of theoretical constructs by estimating a multi-level measurement model where the correlation between the constructs was fixed to 1. To assess MCFA model fit, we used several indexes: (a) root mean square error approximation (RMSEA): .05–.08 = a fair fit; (b) comparative fit index (CFI): best if above .9; and (c) standardized root mean square residual (SRMR): best if less than .08. We used the chi-square difference test ($\Delta\chi^2$) to examine the improvement between nested models. We used Akaike's information criterion (AIC) and Bayesian information criterion (BIC) for non-nested model comparisons with lower values indicative of better model fit.

Prior testing the proposed hypotheses, we estimated null models (i.e., intercept-only model without predictors) to calculate ICC values for the daily constructs. This procedure quantifies the amount of within- and between-person variance and provides support for the need of multilevel modeling (Hoffman, 2015). For the estimation of the indirect effects, the product of coefficients

method was used (Zhang et al., 2009). For making inferences about the indirect effect, we used the method proposed by Preacher and Selig (2012), which uses a Monte Carlo (MC) simulation with 20,000 replications to construct 95% confidence intervals (CIs) for each indirect effect.

Hypothesis testing

We tested the following nested multilevel models: the no predictors (null) Model 0, followed by Model 1 that included demographic (age, hours working per week, educational level, managerial position, and tenure) and general control variables (job pressure and optimism) at Level 2 and within-person control variables at Level 1 (day). Model 2 included fear of COVID-19 (the independent variable at both within and between levels) and the control variables. Model 3 included daily job crafting behaviors (the Level 1 mediators) and their person means at Level 2. For each model, we present the -2 loglikelihood ($-2\log$), AIC, BIC, intercept variances at Level 1 and Level 2, and calculated explained variance (pseudo R^2 , Snijders & Bosker, 2011).

RESULTS

Assumption testing, descriptive statistics, and intercorrelations

Data screening for the assumptions of the general linear model was performed prior to main analyses. We had no missing data on the item and scale levels and no univariate outliers were detected. The average value of the variance inflation factor (VIF) of the variables was 1.83 (range 1.04–2.79), providing evidence for not significant issues about collinearity in the data. The skewness and kurtosis of each variable were less than 1.27 and 5.27, respectively, in absolute value. For moderately non-normal data, the ML estimator provides generally accurate estimates (West et al., 1995). Finally, the residuals of our multilevel analyses followed the normal distribution (Kolmogorov–Smirnov test: $KS = .038$, $p = .746$). In summary, the assumptions of the general linear model hold.

In Table 1, we present bivariate correlations along with descriptive statistics for Level 1 and Level 2 variables.

Results of MCFA with the five latent constructs (work engagement, seeking resources, seeking challenges, reducing demands, and fear of COVID-19) resulted in good overall fit: $\chi^2 (df = 645) = 1765.7$, $p < .001$; CFI = .921; RMSEA = .074; and SRMR_{Within}/SRMR_{Between} = .047/.063; AIC = 22,416.93; BIC = 22,921.47. This model had a better fit to the data compared with a model in which all items loaded on one factor, $\Delta\chi^2 (df = 23) = 3338.84$, $p < .001$; AIC = 26,209.78; BIC = 26,627.71, providing evidence of construct discriminant validity. Moreover, the five-factor model resulted in a better fit compared with a measurement model where all items of work engagement and job crafting loaded into a single latent factor, $\Delta\chi^2 (df = 18) = 2832.87$, $p < .001$; AIC = 25,213.81; BIC = 25,650.57.

Hypothesis testing—Direct effects

In Table 2, we present the results of the nested multilevel model analyses. Model 1, which included the control variables at both levels, fitted the data better than the null model

TABLE 1 Within- and between-person descriptive statistics and zero-order correlations

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
<i>Level 2</i>															
1. Sex	.36	.48	-												
2. Age	30.37	7.83	-.16	-											
3. Educational level	1.94	.5	-.04	-.32**	-										
4. Managerial position	.82	.38	.08	-.17	-.31**	-									
5. Tenure	9.05	7.44	-.23*	.70***	-.23*	-.31**	-								
6. Hours per week	40.03	5.51	-.14	.04	.11	-.18	.35**	-							
7. Trait optimism	3.44	.8	-.00	.27*	-.19	.06	.13	-.02	-						
8. Job pressure	3.82	2.11	-.06	.05	.13	.07	-.09	-.11	-.14	-					
<i>Level 1</i>															
9. Seeking resources	2.36	.91	.15	-.46***	.21*	.16	-.45**	-.06	-.05	.05	-	.37***	-.16**	.17***	.36***
10. Seeking challenges	1.99	1.07	.16	-.37***	.26**	.11	-.28**	-.05	.15	-.13	.58***	-	.03	.08	.27***
11. Reducing demands	2.00	.93	-.01	-.25**	.12	-.07	-.20*	-.14	-.14	.09	-.09	.12	-	-.06	-.27***
12. Fear of COVID-19	1.65	.92	.00	-.08	.12	-.08	.08	-.07	.00	.12	.28**	.24**	.25**	-	.07
13. Work engagement	3.03	.99	-.07	.06	-.13	.01	.18	.06	.41***	-.38***	.37***	.43***	-.10	.08	-

Note: Within-person correlations are presented above the diagonal ($N = 320$). Between-person correlations are presented below the diagonal ($N = 64$). For daily variables, means and standard deviations are based on averaged values across five consecutive workdays.

*** $p < .001$. ** $p < .01$. * $p < .05$.

TABLE 2 Estimates from multilevel analyses with daily work engagement as dependent variable

	Model 0			Model 1			Model 2			Model 3		
	Est	SE	z	Est	SE	z	Est	SE	z	Est	SE	z
Intercept	3.03	.10	29.55**	2.96	1.07	2.76**	2.67	1.08	2.47**	1.36	1.30	2.57*
<i>Between-person variables (Level 2)</i>												
Age				-.03	.02	-1.57	-.02	.02	-1.30	-.01	.01	-.49
Educational level				-.07	.20	-.36	-.09	.20	-.46	-.20	.16	-1.20
Managerial position				.08	.26	.31	.08	.26	.33	-.03	.20	-.17
Tenure				.03	.02	1.81	.03	.02	1.54	.04	.01	2.79**
Hours per week				-.01	.02	-.40	-.01	.02	-.37	-.01	.01	-.63
Trait optimism				.40	.11	3.51**	.39	.11	3.45**	.33	.09	3.48**
Job pressure				-.11	.04	-2.70**	-.12	.04	2.90**	-.12	.03	-3.45**
Fear of COVID-19							.12	.11	1.13	.04	.09	.42
Seeking resources										.56	.14	3.89**
Seeking challenges										.07	.12	.60
Reducing demands										-.01	.11	-.13
<i>Within-person variables (Level 1)</i>												
Time (day)				.02	.02	.95	.02	.02	.98	.02	.02	1.02
Fear of COVID-19							.02	.07	.26	-.05	.07	-.79
Seeking resources										.28	.06	4.23**
Seeking challenges										.15	.05	2.79**
Reducing demands										-.20	.04	-4.17**
-2log (lh)	-367.65			-354.88			-354.22			-310.82		
$\Delta -2\log (\chi^2, df, p\text{-value})$				25.54**		8.00	1.33		2.00	86.79**		6.00
AIC	741.30			731.76			734.43			659.64		

(Continues)

TABLE 2 (Continued)

	Model 0			Model 1			Model 2			Model 3		
	Est	SE	z	Est	SE	z	Est	SE	z	Est	SE	z
BIC	752.59			773.18			783.38			731.18		
Pseudo R^2 —Level 2	.32			.33						.57		
Pseudo R^2 —Level 1	.22			.23						.46		
Level 2 intercept variance (σ^2_b)	.59	.11		.38	.08		.37	.07		.23	.05	
Level 1 intercept variance (σ^2_w)	.38	.03		.38	.03		.38	.03		.30	.02	

Note: Level 1, $N = 64$; Level 2, $N = 320$.

Abbreviations: AIC, Akaike's information criterion; BIC, Bayesian information criterion; Pseudo R^2 , approximately estimated based on Snijders and Bosker (2011).

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

($\Delta -2\log = 25.54$, $\Delta df = 8$, $p < .001$). At Level 2, trait optimism related positively ($.40$, $p < .001$) and job pressure negatively ($-.11$, $p = .007$) to work engagement. These variables were retained in the subsequent analyses. At Level 1, the effect of day was not statistically significant. Model 2 included fear of COVID-19 at both levels and did not fit the data significantly better than Model 1 ($\Delta -2\log = 1.33$, $\Delta df = 2$, $p = .51$). The direct effect of fear of COVID-19 on work engagement was not statistically significant. According to Zhao et al. (2010), indirect effects can be tested without a significant effect of fear of COVID-19 (independent variable) on work engagement (dependent variable) (see also Hayes, 2017).

In Model 3, we added both at Level 1 and Level 2, job crafting dimensions as potential mediator variables to test the indirect effect of fear of COVID-19 on work engagement. The inclusion of job crafting behaviors significantly improved model fit ($\Delta -2\log = 86.79$, $\Delta df = 6$, $p < .001$). In Model 3, the explained total variance by the collective set of predictors of the theoretical model was 57% at Level 2 and 46% at Level 1 (Table 2).

Hypothesis 1a and Hypothesis 1b predicted a positive correlation between fear of COVID-19 with seeking resources and seeking challenges and a negative correlation with reducing demands. At Level 2, after controlling for employees' trait optimism, job pressure, and tenure, fear of COVID-19 correlated positively to seeking resources ($.15$, $p < .01$), seeking challenges ($.16$, $p < .01$), and reducing demands ($.15$, $p < .001$) (see Table 3). These results provide partial support for Hypothesis 1a. At Level 1, only seeking resources ($.18$, $p < .001$) positively related to fear of COVID-19, thus, partially supporting Hypothesis 1b.

Hypothesis 2a and Hypothesis 2b predicted a positive correlation between job crafting behaviors and work engagement. At Level 2, only seeking resources was found to be significantly and positively related ($.56$, $p < .001$) to work engagement. The inclusion of seeking resources at Level 2 increased the explained variance in work engagement by 2%. These results provide partial support for Hypothesis 2a. At Level 1, seeking resources ($.28$, $p < .001$) and seeking challenges ($.15$, $p < .001$) were positively related to work engagement and reducing demands were negatively related to work engagement ($-.20$, $p < .001$), explaining an additional 18% in the explained variance, thus, supporting Hypothesis 2b.

Hypothesis testing—Indirect effects

We tested the theoretical model in Figure 1, to estimate indirect paths while controlling for direct paths (Table 3). Hypothesis 3a predicted that at the daily level, fear of COVID-19 has a positive, indirect relationship with work engagement through job crafting dimensions. Examining the results for indirect relationships, the proposed model suggested an indirect relationship of fear of COVID-19 on work engagement through seeking resources ($.05$, $p < .001$). Analyses with the MC method suggested that the 95% MC CI did not contain zero: 95% MCCI [.02–.08], thus, partially supporting Hypothesis 3a.

Hypothesis 3b predicted that at the between level, an indirect relationship exists between fear of COVID-19 and work engagement through job crafting behaviors. Results presented in Table 3 provided partial support. At the between-person level, fear of COVID had an indirect relationship with work engagement, only through seeking resources ($.08$, $p < .001$; 95% MCCI [.02–.15]). At the within-person level, the total effect of fear of COVID-19 on work engagement was $.07$, $p < .001$; 95% MCCI [.02–.12]. At the between-person level, the total effect of fear of COVID-19 on work engagement was also significant and positive: $.09$, $p < .001$; 95% MCCI [.02–.17]. In summary, for both Level 1 and Level 2, results point to an indirect-only (i.e., full

TABLE 3 Multilevel path analysis results for direct and indirect effects of fear on COVID-19 on work engagement via seeking resources, seeking challenges, and reducing demands (unstandardized estimates)

Predictor	Outcome							
	Seeking resources		Seeking challenges		Reducing demands		Work engagement	
	Direct	Indirect	Direct	Indirect	Direct	Indirect	Direct	Indirect
<i>Within level (Level 1)</i>								
Fear of COVID-19	.18** [.06; .29]		.01 [-.13; .15]		-.08 [-.23; -.07]		.008 [-.13; -.15]	
Seeking resources							.28** [.14; -.40]	.05** [.02; -.08]
Seeking challenges							.15** [.05; -.26]	.001 [-.03; .04]
Reducing demands							-.20** [-.29; -.10]	.01 [-.01; .05]
<i>Between level (Level 2)</i>								
Fear of COVID-19	.15* [.04; -.25]		.16* [.05; -.28]		.18** [.09; -.27]		.15 [-.06; .29]	
Seeking resources							.56** [.29; .85]	.08** [.02; .15]
Seeking challenges							.05 [-.18; .28]	.001 [-.01; .02]
Reducing demands							.005 [-.19; .21]	.000 [-.02; .03]

Note: Shown in parentheses are 95% Monte Carlo confidence intervals (20,000 samples); Level 1, $N = 64$; Level 2, $N = 320$. Control variables: trait optimism, job pressure, and tenure.

** $p < .001$.

* $p < .01$.

mediation) model. That is, seeking job resources fully mediates the relationship between fear of COVID-19 and work engagement.

Supplementary analyses—Lagged effects

In the mediation model, we included constructed lagged variables for job crafting behaviors and work engagement for the previous day (we thank an anonymous reviewer for this). The inclusion of previous' day job crafting behaviors and work engagement significantly improved model fit ($\Delta -2\log = 131.39$, $\Delta df = 6$, $p < .001$). None of the lagged variables significantly related to next days' engagement. In addition, only previous days' seeking resources had a significant lagged effect on next days' corresponding variable ($b = -.17$, $SE = .06$, $p < .01$). The indirect effect of previous days' seeking resources on next days' engagement was not significant. The indirect relationship of fear of COVID-19 on work engagement through seeking resources remained statistically significant ($.07$, $p < .001$).

Moreover, apart from our hypothesized model, we tested an alternative multilevel model, in which the order of job crafting and work engagement is reversed. This model had worse fit (AIC = 3809.96; BIC = 3881.498).

DISCUSSION

During the COVID-19 pandemic, significant proportions of the population have reported high levels of contagion concerns about one's self or family or friends becoming infected (Ahorsu et al., 2020; Şimşir et al., 2021). At the same time, several categories of employees are allowed, or urged, to go to work to perform essential duties for the society and the economy (van Zoonen & Ter Hoeven, 2021). Accordingly, it is critical to understand how such employees respond and cope with the fear of COVID-19 and maintain their work engagement. The purpose of the present research was to address this issue by exploring how employees respond and cope with the fear of COVID-19 at work by examining fluctuations of fear of COVID-19, job crafting behaviors, and work engagement. By following employees working in public organizations for five consecutive working days, we found evidence that fear of COVID-19 had an indirect and positive effect on work engagement through seeking social job resources.

Theoretical contribution

The majority of contemporary theory and research about fear of COVID-19 at work has been cross-sectional (e.g., Kramer & Kramer, 2020). Using a daily diary study approach, we conceptualized fear of COVID-19 not only at the between level but also at the daily level. Results of MCFA confirmed the one-factor structure of fear of COVID-19 at both levels. Moreover, the large amount of within-person variability indicates that fear of COVID-19 varied substantially from day to day. Thus, fear of COVID-19 can be conceived as a dynamic concept that varies within employees across time and situations. Employees who are on average less fearful of COVID-19 may experience days with increased levels of fear. Our study opens the road to more episodic approaches to the study of fear in general and fear of COVID-19 in particular in organizations (Jordan et al., 2020; Oh & Farh, 2017).

Although previous research has primarily examined “flight” responses to fear at work (Ashkanasy & Dorris, 2017; Jordan et al., 2020), our findings suggest that the protective behavior of fear may not always be associated with a “flight” response. Rather, our study points to the functional view of emotions, which suggests that negative emotions such as fear can be motivational and adaptive, coordinating employees' actions to deal with existing (or potential) threats (George, 2011; Lebel, 2017). Compared with previous research on the role of fear in employee silence, unfair treatment, or in situations of potential organizational layoffs (Jordan et al., 2020; Oh & Farh, 2017), our study differs in that the source of origin of the threat is different and refers to an invisible and contagious virus (COVID-19). Prior the COVID-19 pandemic, meta-analytic studies have reported a moderate correlation between fear and anxiety ($r = .32$) (Sylvers et al., 2011). During the pandemic, the meta-analysis of Erbiçer et al. (2022) has reported a strong relationship between the fear of COVID-19 and anxiety ($r = .55$). Although the COVID-19 pandemic has created a threatening situation for people around the world, this article provides evidence that fear of COVID-19 is related to proactive behaviors in the form of job crafting, contributing to the growing body of research examining the functional view of negative emotions in organizations (George, 2011; Humphrey et al., 2022; Lebel, 2017). Importantly, we controlled for general job pressure and optimism highlighting the situation-specific fear of COVID-19 that can trigger proactive behaviors.

Consistent with previous research, our findings underscore the motivational nature of job resources as antecedent to work engagement (Xanthopoulou & Bakker, 2021). In line with COR (Hobfoll et al., 2018), our result suggests that, on days at work that employees experienced events that elicited more fear of COVID-19, than average, they searched for social job resources from colleagues and supervisors. This was also found at the between level of analysis: Employees who on average experience more fear of COVID-19 at work tend to search for more social job resources. Proactively crafting social job resources, therefore, is a mechanism for coping with fear of COVID-19 because supervisors and colleagues may provide advice and instrumental help that helps employees to alleviate the perceived threat and perceive events as manageable. Thus, the present study extends the beneficial role of job crafting under conditions of increased demands and limited resources found in previous research (e.g., Petrou et al., 2012, 2017) to conditions of personal harm or loss.

In contrast to seeking resources, seeking job challenges and reducing job demands do not seem to benefit employees in the present study. Seeking challenges refers to activities that provide opportunities for employee growth whereas reducing job demands refers to minimizing the mentally, physically, or emotionally demanding aspects of one's work. Both of these job crafting behaviors are primarily intraindividual rather socially derived processes (Petrou et al., 2012, 2017). This pattern of results points to the important role of social resource seeking in relation to fear. Specifically, by approaching managers or colleagues and asking, for example, for advice (i.e., seeking social resources), employees have the opportunity to respite briefly away from the fear-inducing tasks. This is in line with the avoidant/flight tendency associated with fear and discussed in previous research. However, it is this same behavior (seeking resources) that can lead to beneficial outcomes. Thus, the boundaries between approach versus avoidant tendencies may not be easily defined because an avoidant/flight response (going away from the actual tasks and talking to colleagues about it) may actually lead to a beneficial and approach-oriented outcome of job crafting (we thank an anonymous reviewer for this). This can be considered as providing a potential extension to job crafting theory concerning the different roles of the job crafting dimensions in organizations (Demerouti et al., 2015; Harju et al., 2016; Petrou et al., 2012, 2017).

Limitations and future research

We acknowledge several limitations of the study. First, measures used in the study were self-reports and came from the same source, which raises concerns about common-method variance. Future research could use multisource data to further validate our findings. However, results of MCFA suggested that common-method variance is not a serious problem for this study. Second, we asked employees to provide repeated information about their experiences for five consecutive workdays and, as such, their responses may have been affected by our repetitive diary design. Results from variance analyses, through the calculation of ICCs for the daily measures, suggested that habituation effects did not influence the results of this study substantially. Third, the sample size at Level 2 ($N = 64$) can be considered rather small. Although this sample size is consistent with previous diary studies (e.g., Xanthopoulou et al., 2009), and we have used manifest variables, instead of latent variables to simplify analyses, future research could follow the advice of simulation studies suggesting that samples of 100 or more units at Level 2 lead to unbiased estimates for computing more complex hypotheses (e.g., Scherbaum & Ferreter, 2009). Fourth, although our results were in the hypothesized direction, we need to stress that our data are correlational and inferences about causality are limited; future research could employ appropriate designs to resolve this issue. Supplementary analyses, however, showed that the indirect effect of anxiety on job crafting via work engagement is less likely, which alleviates concerns regarding the ordering of variables in our model. Fifth, our sample consisted of a relatively homogenous sample of tenured employees, not teleworking, in Greek public service organizations during the third wave of the COVID-19 pandemic. Although this sample was suitable for our purposes because we implicitly controlled for the threat of job loss, future research could use samples from different countries. Sixth, we had not actually assessed COVID-19-related events strength at work. Future research could assess work-related events by determining employee perceptions of specific event novelty, disruption, and criticality. Seventh, in our study, we used a measure of seeking job resources from the study of Petrou et al. (2012) that assessed social job resources (e.g., asking colleagues for advice). Future research could benefit by incorporating a measure of structural job resources (e.g., try to learn new things at work) (Tims et al., 2013). For example, according to the affect-as-information model (Schwarz & Bohner, 1996), it is plausible that fear of COVID-19 contributes to employees increasing their efforts to prepare for demanding tasks that require higher order skills at their work, in the future. Finally, we need to stress the low reliability of some of our constructs (i.e., dispositional optimism) (e.g., Lyraeos et al., 2010) and the fact that we did not include moderator variables in our study. An avenue for future research could be the use of moderator variables, such as emotional intelligence and emotion regulation (Gross, 1998; Kafetsios & Zampetakis, 2008). For example, how employee emotion regulation skills alter the COVID-19 to job crafting path. Moreover, future research could benefit by incorporating constructs such as promotion and prevention focus from regulatory focus theory (Higgins, 1998) as moderators. Promotion focus places emphasis on employees' motivation to grow whereas prevention focus places emphasis on employees' motivation to be responsible. It is plausible that a different pattern of relationships exists between fear of COVID-19 and job crafting for employees with distinct regulatory orientations.

Practical implications and conclusion

Our results suggest that employees during the COVID-19 pandemic should be granted the opportunity to increase their resources at work, on a daily basis, to cope with fear of COVID-19 and sustain their work engagement. Mechanisms to increase employees' job crafting within the JD-R theory have been developed (Demerouti et al., 2019). Recently, electronic job crafting interventions have been developed with promising results (Verelst et al., 2021).

To conclude, the COVID-19 pandemic is considered a strong event due to its novelty, criticality, disruptiveness, and its duration (Morgeson et al., 2015). We hypothesized that the experienced fear of COVID-19 would relate to direct and indirect responses. Results suggested that the direct response relates to seeking resources behaviors, suggesting a form of resource-based coping suggested by COR (Hobfoll et al., 2018), whereas the indirect response relates to work engagement through seeking resources, suggesting a controlled mechanism based on cognition (Moors et al., 2013). Our results contribute to the growing literature on the effects of COVID-19 pandemic at work (Kramer & Kramer, 2020) in general and the potential positive role of negative emotions in organizations in particular (Humphrey et al., 2022; Lebel, 2017).

CONFLICT OF INTEREST

The author declares no conflict of interest.

ETHICS STATEMENT

The study was carried out in accordance with the recommendations of the Research Ethics Committee at the University of Crete, Greece (REC approval code: 67/1105).

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

Leonidas A. Zampetakis  <https://orcid.org/0000-0002-9568-6302>

REFERENCES

- Ahorsu, D. K., Lin, C.-Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2020). The fear of COVID-19 scale: Development and initial validation. *International Journal of Mental Health and Addiction*, 1–9. <https://doi.org/10.1007/s11469-020-00270-8>
- Antonakis, J., Bastardo, N., & Rönkkö, M. (2021). On ignoring the random effects assumption in multilevel models: Review, critique, and recommendations. *Organizational Research Methods*, 24(2), 443–483. <https://doi.org/10.1177/1094428119877457>
- Ashkanasy, N. M., & Dorris, A. D. (2017). Emotions in the workplace. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 67–90. <https://doi.org/10.1146/annurev-orgpsych-032516-113231>
- Bakker, A. B., & Oerlemans, W. G. (2019). Daily job crafting and momentary work engagement: A self-determination and self-regulation perspective. *Journal of Vocational Behavior*, 112, 417–430. <https://doi.org/10.1016/j.jvb.2018.12.005>
- Cheng, T.-M., Hong, C.-Y., & Zhong, Z.-F. (2021). Tourism employees' fear of COVID-19 and its effect on work outcomes: The role of organizational support. *Current Issues in Tourism*, 25(2), 319–337. <https://doi.org/10.1080/13683500.2021.1978952>

- Demerouti, E., Bakker, A. B., & Halbesleben, J. R. (2015). Productive and counterproductive job crafting: A daily diary study. *Journal of Occupational Health Psychology, 20*(4), 457–469. <https://doi.org/10.1037/a0039002>
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology, 86*(3), 499–512. <https://doi.org/10.1037/0021-9010.86.3.499>
- Demerouti, E., Peeters, M. C., & van den Heuvel, M. (2019). Job crafting interventions: Do they work and why? In L. Van Zyl & S. Rothmann (Eds.), *Positive psychological intervention design and protocols for multi-cultural contexts* (pp. 103–126). Springer. https://doi.org/10.1007/978-3-030-20020-6_5
- Demerouti, E., Soyer, L. M., Vakola, M., & Xanthopoulou, D. (2021). The effects of a job crafting intervention on the success of an organizational change effort in a blue-collar work environment. *Journal of Occupational and Organizational Psychology, 94*(2), 374–399. <https://doi.org/10.1111/joop.12330>
- Erbiçer, E. S., Metin, A., Çetinkaya, A., & Şen, S. (2022). The relationship between fear of COVID-19 and depression, anxiety, and stress. *European Psychologist, 26*, 323–333. <https://doi.org/10.1027/1016-9040/a000464>
- Fay, D., & Frese, M. (2001). The concept of personal initiative: An overview of validity studies. *Human Performance, 14*(1), 97–124. https://doi.org/10.1207/s15327043hup1401_06
- Frijda, N. H. (2007). *The laws of emotion*. Lawrence Erlbaum, Inc.
- Garfin, D. R., Silver, R. C., & Holman, E. A. (2020). The novel coronavirus (COVID-2019) outbreak: Amplification of public health consequences by media exposure. *Health Psychology, 39*(5), 355–357. <https://doi.org/10.1037/hea0000875>
- George, J. M. (2011). Dual tuning: A minimum condition for understanding affect in organizations? *Organizational Psychology Review, 1*(2), 147–164. <https://doi.org/10.1177/2041386610390257>
- Grant, A. M., & Parker, S. K. (2009). 7 redesigning work design theories: The rise of relational and proactive perspectives. *Academy of Management Annals, 3*(1), 317–375. <https://doi.org/10.5465/19416520903047327>
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology, 2*(3), 271–299. <https://doi.org/10.1037/1089-2680.2.3.271>
- Halbesleben, J. R., Neveu, J.-P., Paustian-Underdahl, S. C., & Westman, M. (2014). Getting to the “COR” understanding the role of resources in conservation of resources theory. *Journal of Management, 40*(5), 1334–1364. <https://doi.org/10.1177/0149206314527130>
- Harju, L. K., Hakanen, J. J., & Schaufeli, W. B. (2016). Can job crafting reduce job boredom and increase work engagement? A three-year cross-lagged panel study. *Journal of Vocational Behavior, 95*, 11–20. <https://doi.org/10.1016/j.jvb.2016.07.001>
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Publications.
- Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (pp. 1–46). Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60381-0](https://doi.org/10.1016/S0065-2601(08)60381-0)
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*(3), 513–524. <https://doi.org/10.1037/0003-066x.44.3.513>
- Hobfoll, S. E., Halbesleben, J., Neveu, J.-P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior, 5*, 103–128. <https://doi.org/10.1146/annurev-orgpsych-032117-104640>
- Hoffman, L. (2015). *Longitudinal analysis: Modeling within-person fluctuation and change*. Routledge.
- Humphrey, R. H., Ashkanasy, N. M., & Troth, A. C. (2022). Solutions to negative emotions. In R. H. Humphrey, N. M. Ashkanasy, & A. C. Troth (Eds.), *Emotions and negativity (research on emotion in organizations, Vol. 17)* (pp. 277–290). Emerald Publishing Limited. <https://doi.org/10.1108/S1746-97912021000017019>
- Izard, C. E. (1991). *The psychology of emotions*. Plenum Press. <https://doi.org/10.1007/978-1-4899-0615-1>
- Jordan, P., Troth, A., Ashkanasy, N., & Humphrey, R. (2020). The antecedents and consequences of fear at work. In L. Yang, R. Cropanzano, C. Daus, & V. Martínez-Tur (Eds.), *The Cambridge handbook of workplace affect* (pp. 402–413). Cambridge University Press. <https://doi.org/10.1017/9781108573887.031>
- Kafetsios, K., & Zampetakis, L. A. (2008). Emotional intelligence and job satisfaction: Testing the mediatory role of positive and negative affect at work. *Personality and Individual Differences, 44*(3), 712–722. <https://doi.org/10.1016/j.paid.2007.10.004>
- Kim, N., & Kang, S. W. (2017). Older and more engaged: The mediating role of age-linked resources on work engagement. *Human Resource Management, 56*(5), 731–746. <https://doi.org/10.1002/hrm.21802>

- Kramer, A., & Kramer, K. Z. (2020). The potential impact of the Covid-19 pandemic on occupational status, work from home, and occupational mobility. *Journal of Vocational Behavior, 119*, 103442. <https://doi.org/10.1016/j.jvb.2020.103442>
- Labrague, L. J., & de Los Santos, J. A. A. (2021). Fear of Covid-19, psychological distress, work satisfaction and turnover intention among frontline nurses. *Journal of Nursing Management, 29*(3), 395–403. <https://doi.org/10.1111/jonm.13168>
- Lazarus, R. S., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality, 1*(3), 141–169. <https://doi.org/10.1002/per.2410010304>
- Lebel, R. D. (2017). Moving beyond fight and flight: A contingent model of how the emotional regulation of anger and fear sparks proactivity. *Academy of Management Review, 42*(2), 190–206. <https://doi.org/10.5465/amr.2014.0368>
- Lin, W., Shao, Y., Li, G., Guo, Y., & Zhan, X. (2021). The psychological implications of COVID-19 on employee job insecurity and its consequences: The mitigating role of organization adaptive practices. *Journal of Applied Psychology, 106*(3), 317–329. <https://doi.org/10.1037/apl0000896>
- Liu, D., Chen, Y., & Li, N. (2021). Tackling the negative impact of COVID-19 on work engagement and taking charge: A multi-study investigation of frontline health workers. *Journal of Applied Psychology, 106*(2), 185–198. <https://doi.org/10.1037/apl0000866>
- Lyrakos, G. N., Damigos, D., Mavreas, V., Georgia, K., & Dimoliatis, I. D. (2010). A translation and validation study of the life orientation test revised in the Greek speaking population of nurses among three hospitals in Athens and Ioannina. *Social Indicators Research, 95*(1), 129–142. <https://doi.org/10.1007/s11205-009-9453-6>
- Mäkikangas, A. (2018). Job crafting profiles and work engagement: A person-centered approach. *Journal of Vocational Behavior, 106*, 101–111. <https://doi.org/10.1016/j.jvb.2018.01.001>
- Moors, A., Ellsworth, P. C., Scherer, K. R., & Frijda, N. H. (2013). Appraisal theories of emotion: State of the art and future development. *Emotion Review, 5*(2), 119–124. <https://doi.org/10.1177/1754073912468165>
- Morgeson, F. P., Mitchell, T. R., & Liu, D. (2015). Event system theory: An event-oriented approach to the organizational sciences. *Academy of Management Review, 40*(4), 515–537. <https://doi.org/10.5465/amr.2012.0099>
- Ng, T. W., & Feldman, D. C. (2009). How broadly does education contribute to job performance? *Personnel Psychology, 62*(1), 89–134. <https://doi.org/10.1111/j.1744-6570.2008.01130.x>
- Oh, J. K., & Farh, C. I. (2017). An emotional process theory of how subordinates appraise, experience, and respond to abusive supervision over time. *Academy of Management Review, 42*(2), 207–232. <https://doi.org/10.5465/amr.2014.0347>
- Parlapani, E., Holeva, V., Voitsidis, P., Blekas, A., Gliatas, I., Porfyri, G. N., Golemis, A., Papadopoulou, K., Dimitriadou, A., Chatzigeorgiou, A. F., Bairachtari, V., Patsiala, S., Skoupra, M., Papigkioti, K., Kafetzopoulou, C., & Diakogiannis, I. (2020). Psychological and behavioral responses to the COVID-19 pandemic in Greece. *Frontiers in Psychiatry, 11*, 821. <https://doi.org/10.3389/fpsy.2020.00821>
- Peng, A. C., Schaubroeck, J. M., Chong, S., & Li, Y. (2019). Discrete emotions linking abusive supervision to employee intention and behavior. *Personnel Psychology, 72*, 393–419. <https://doi.org/10.1111/peps.12310>
- Petrou, P., Demerouti, E., Peeters, M. C., Schaufeli, W. B., & Hetland, J. (2012). Crafting a job on a daily basis: Contextual correlates and the link to work engagement. *Journal of Organizational Behavior, 33*(8), 1120–1141. <https://doi.org/10.1002/job.1783>
- Petrou, P., Demerouti, E., & Xanthopoulou, D. (2017). Regular versus cutback-related change: The role of employee job crafting in organizational change contexts of different nature. *International Journal of Stress Management, 24*(1), 62–85. <https://doi.org/10.1037/str0000033>
- Preacher, K. J., & Selig, J. P. (2012). Advantages of Monte Carlo confidence intervals for indirect effects. *Communication Methods and Measures, 6*(2), 77–98. <https://doi.org/10.1080/19312458.2012.679848>
- Preacher, K. J., Zyphur, M. J., & Zhang, Z. (2010). A general multilevel SEM framework for assessing multilevel mediation. *Psychological Methods, 15*(3), 209–233. <https://doi.org/10.1037/a0020141>
- Rigotti, T., Yang, L. Q., Jiang, Z., Newman, A., De Cuyper, N., & Sekiguchi, T. (2021). Work-related psychosocial risk factors and coping resources during the COVID-19 crisis. *Applied Psychology: An International Review, 70*(1), 3–15. <https://doi.org/10.1111/apps.12307>
- Roseman, I. J., Spindel, M. S., & Jose, P. E. (1990). Appraisals of emotion-eliciting events: Testing a theory of discrete emotions. *Journal of Personality and Social Psychology, 59*(5), 899–915. <https://doi.org/10.1037/0022-3514.59.5.899>

- Rothmann, S. (2008). Job satisfaction, occupational stress, burnout and work engagement as components of work-related wellbeing. *SA Journal of Industrial Psychology, 34*(3), 11–16. <https://doi.org/10.4102/sajip.v34i3.424>
- Rudolph, C. W., Katz, I. M., Lavigne, K. N., & Zacher, H. (2017). Job crafting: A meta-analysis of relationships with individual differences, job characteristics, and work outcomes. *Journal of Vocational Behavior, 102*, 112–138. <https://doi.org/10.1016/j.jvb.2017.05.008>
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 25*(3), 293–315. <https://doi.org/10.1002/job.248>
- Scherbaum, C. A., & Ferreter, J. M. (2009). Estimating statistical power and required sample sizes for organizational research using multilevel modeling. *Organizational Research Methods, 12*(2), 347–367. <https://doi.org/10.1177/1094428107308906>
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): a reevaluation of the Life Orientation Test. *Journal of personality and social psychology, 67*(6), 1063–1078. <https://doi.org/10.1037//0022-3514.67.6.1063>
- Schmitt, A., Gielnik, M. M., & Seibel, S. (2019). When and how does anger during goal pursuit relate to goal achievement? The roles of persistence and action planning. *Motivation and Emotion, 43*(2), 205–217. <https://doi.org/10.1007/s11031-018-9720-4>
- Schwarz, N., & Bohner, G. (1996). Feelings and their motivational implications. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action* (pp. 119–145). Guilford Press.
- Şmşir, Z., Koç, H., Seki, T., & Griffiths, M. D. (2021). The relationship between fear of COVID-19 and mental health problems: A meta-analysis. *Death Studies, 46*(3), 515–523. <https://doi.org/10.1080/07481187.2021.1889097>
- Smith, C. A., & Ellsworth, P. C. (1985). Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology, 48*(4), 813–838. <https://doi.org/10.1037/0022-3514.48.4.813>
- Snijders, T. A., & Bosker, R. J. (2011). *Multilevel analysis: An introduction to basic and advanced multilevel modeling* (2nd ed.). Sage.
- Spielberger, C. D., & Reheiser, E. C. (1994). Job stress in university, corporate, and military personnel. *International Journal of Stress Management, 1*(1), 19–31. <https://doi.org/10.1007/BF01857281>
- Sylvers, P., Lilienfeld, S. O., & LaPrairie, J. L. (2011). Differences between trait fear and trait anxiety: Implications for psychopathology. *Clinical Psychology Review, 31*(1), 122–137. <https://doi.org/10.1016/j.cpr.2010.08.004>
- Tims, M., Bakker, A. B., & Derks, D. (2013). The impact of job crafting on job demands, job resources, and well-being. *Journal of Occupational Health Psychology, 18*(2), 230–240. <https://doi.org/10.1037/a0032141>
- Trougakos, J. P., Chawla, N., & McCarthy, J. M. (2020). Working in a pandemic: Exploring the impact of COVID-19 health anxiety on work, family, and health outcomes. *Journal of Applied Psychology, 105*(11), 1234–1245. <https://doi.org/10.1037/apl0000739>
- Tsipropoulou, V., Nikopoulou, V. A., Holeva, V., Nasika, Z., Diakogiannis, I., Sakka, S., Kostikidou, S., Varvara, C., Spyridopoulou, E., & Parlapani, E. (2020). Psychometric properties of the Greek version of FCV-19S. *International Journal of Mental Health and Addiction, 19*(6), 2279–2288. <https://doi.org/10.1007/s11469-020-00319-8>
- Tuckey, M. R., Searle, B., Boyd, C. M., Winefield, A. H., & Winefield, H. R. (2015). Hindrances are not threats: Advancing the multidimensionality of work stress. *Journal of Occupational Health Psychology, 20*(2), 131–147. <https://doi.org/10.1037/a0038280>
- Van Emmerik, I. H., Euwema, M. C., & Bakker, A. B. (2007). Threats of workplace violence and the buffering effect of social support. *Group & Organization Management, 32*(2), 152–175. <https://doi.org/10.1177/1059601106286784>
- van Zoonen, W., & Ter Hoeven, C. L. (2021). Disruptions and general distress for essential and nonessential employees during the COVID-19 pandemic. *Journal of Business and Psychology, 37*(2), 443–458. <https://doi.org/10.1007/s10869-021-09744-5>

- Verelst, L., De Cooman, R., Verbruggen, M., Van Laar, C., & Meeussen, L. (2021). The development and validation of an electronic job crafting intervention: Testing the links with job crafting and person-job fit. *Journal of Occupational and Organizational Psychology*, *94*(2), 338–373. <https://doi.org/10.1111/joop.12351>
- Vogt, K., Hakanen, J. J., Brauchli, R., Jenny, G. J., & Bauer, G. F. (2016). The consequences of job crafting: A three-wave study. *European Journal of Work and Organizational Psychology*, *25*(3), 353–362. <https://doi.org/10.1080/1359432X.2015.1072170>
- West, S. G., Finch, J. F., & Curran, P. J. (1995). Structural equation models with nonnormal variables: Problems and remedies. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 56–75). Sage Publications, Inc.
- Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of Management Review*, *26*, 179–201. <https://doi.org/10.5465/amr.2001.4378011>
- Xanthopoulou, D., & Bakker, A. B. (2021). Antecedents and consequences of work engagement: a multilevel nomological net. In J. P. Meye & B. Schneider (Eds.), *A research agenda for employee engagement in a changing world of work* (pp. 37–51). Edward Elgar Publishing. <https://doi.org/10.4337/9781789907858.00010>
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, *14*(2), 121–141. <https://doi.org/10.1037/1072-5245.14.2.121>
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Work engagement and financial returns: A diary study on the role of job and personal resources. *Journal of Occupational and Organizational Psychology*, *82*(1), 183–200. <https://doi.org/10.1348/096317908X285633>
- Zampetakis, L. A. (2021). Does an overall job crafting dimension exist? A multidimensional item response theory analysis. *European Journal of Psychological Assessment*, *38*(1), 32–35. <https://doi.org/10.1027/1015-5759/a000638>
- Zampetakis, L. A., & Melas, C. (2021). The health belief model predicts vaccination intentions against COVID-19: A survey experiment approach. *Applied Psychology: Health and Well-Being*, *13*, 469–484. <https://doi.org/10.1111/aphw.12262>
- Zhang, Z., Zyphur, M. J., & Preacher, K. J. (2009). Testing multilevel mediation using hierarchical linear models: Problems and solutions. *Organizational Research Methods*, *12*(4), 695–719. <https://doi.org/10.1177/1094428108327450>
- Zhao, X., Lynch, J. G. Jr., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, *37*(2), 197–206. <https://doi.org/10.1086/651257>

How to cite this article: Zampetakis, L. A. (2022). Employees' fear at work, job crafting, and work engagement on a daily basis: The case for fear of COVID-19. *Applied Psychology*, 1–24. <https://doi.org/10.1111/apps.12388>