

COVID-19 and the Workplace:

Implications, Issues, and Insights for Future Research and Action

Kevin M. Kniffin¹, Jayanth Narayanan², Frederik Anseel³, John Antonakis⁴, Susan P. Ashford⁵, Arnold B. Bakker⁶, Peter Bamberger^{7, 8}, Hari Bapuji⁹, Devasheesh P. Bhawe¹⁰, Virginia K. Choi¹¹, Stephanie J. Creary¹², Evangelia Demerouti¹³, Francis J. Flynn¹⁴, Michele J. Gelfand¹¹, Lindred L. Greer⁵, Gary Johns^{15, 16}, Selin Kesebir¹⁷, Peter G. Klein¹⁸, Sun Young Lee¹⁹, Hakan Ozcelik²⁰, Jennifer Louise Petriglieri²¹, Nancy P. Rothbard¹², Cort W. Rudolph²², Jason D. Shaw²³, Nina Sirola¹⁰, Connie R. Wanberg²⁴, Ashley Whillans²⁵, Michael P. Wilmot²⁶, and Mark van Vugt²⁷

Author Note

Kevin M. Kniffin, Jayanth Narayanan, and Mark van Vugt conceptualized the article and wrote the original and revised versions with multiple rounds of input, editing, and review by each additional co-author (listed alphabetically by last name) Frederik Anseel, John Antonakis, Susan P. Ashford, Arnold B. Bakker, Peter Bamberger, Hari Bapuji, Devasheesh P. Bhawe, Virginia K. Choi, Stephanie J. Creary, Evangelia Demerouti, Francis J. Flynn, Michele J. Gelfand, Lindred Greer, Gary Johns, Selin Kesebir, Peter G. Klein, Sun Young Lee, Hakan Ozcelik, Jennifer Louise Petriglieri, Nancy P. Rothbard, Cort W. Rudolph, Jason D. Shaw, Nina Sirola, Connie R. Wanberg, Ashley Whillans, and Michael P. Wilmot.

- ¹ Dyson School of Applied Economics and Management, SC Johnson College of Business,
Cornell University
- ² National University of Singapore
- ³ UNSW Business School, UNSW Sydney
- ⁴ University of Lausanne
- ⁵ Stephen M. Ross School of Business, University of Michigan
- ⁶ Center of Excellence for Positive Organizational Psychology, Erasmus University Rotterdam
- ⁷ Collier School of Management, Tel Aviv University
- ⁸ Smithers Institute, Cornell University
- ⁹ University of Melbourne
- ¹⁰ Singapore Management University
- ¹¹ University of Maryland, College Park
- ¹² The Wharton School, University of Pennsylvania
- ¹³ Eindhoven University of Technology
- ¹⁴ Graduate School of Business, Stanford University
- ¹⁵ John Molson School of Business, Concordia University
- ¹⁶ Sauder School of Business, University of British Columbia
- ¹⁷ London Business School
- ¹⁸ Hankamer School of Business, Baylor University
- ¹⁹ UCL School of Management
- ²⁰ California State University, Sacramento
- ²¹ INSEAD
- ²² Saint Louis University
- ²³ Nanyang Technology University, Singapore
- ²⁴ University of Minnesota
- ²⁵ Harvard Business School
- ²⁶ Sam M. Walton College of Business, University of Arkansas
- ²⁷ Vrije Universiteit Amsterdam

Corresponding Author:

Kevin M. Kniffin
Dyson School of Applied Economics and Management
SC Johnson College of Business
Cornell University

email: kmk276@cornell.edu

Abstract

COVID-19's impacts on workers and workplaces across the globe have been dramatic. This broad review of prior research rooted in work and organizational psychology, and related fields, is intended to make sense of the implications for employees, teams, and work organizations. This review and preview of relevant literatures focuses on: (i) emergent changes in work practices (e.g., working from home, virtual teamwork) and (ii) emergent changes for workers (e.g, social distancing, stress, and unemployment). In addition, potential moderating factors (demographic characteristics, individual differences, and organizational norms) are examined given the likelihood that COVID-19 will generate disparate effects. This broad-scope overview provides an integrative approach for considering the implications of COVID-19 for work, workers, and organizations while also identifying issues for future research and insights to inform solutions.

Keywords: COVID-19; Employees; Work; Work From Home (WFH); Pandemics

Public Significance Statement

COVID-19 has disrupted work and organizations across the globe. This overview integrates and applies prior research in work and organizational psychology as well as related fields in its examination of emergent changes for work practices as well as workers. This article also acknowledges and considers the disproportionate impacts that COVID-19 may have on workers depending on demographic characteristics, individual differences, and relevant organizational norms. In addition to helping make sense of the implications of COVID-19 for employees, teams, and work organizations, this review features roadmaps for future research and action.

COVID-19 and the Workplace:**Implications, Issues, and Insights for Future Research and Action**

COVID-19 is both a global health crisis and an international economic threat. The business and industry shutdowns that were implemented and mandated across the world to curb the spread of the virus have generated a wide array of unique challenges for employees and employers. At the individual level, populations of shutdown-affected employees were turned overnight into (a) “work from home” employees, (b) “essential” or “life-sustaining” workers (e.g., emergency room medical personnel and supermarket staff), or (c) furloughed or laid-off employees seeking the nation-specific equivalent of unemployment benefits. Organizationally, the economic shutdowns and policy changes are likely to (i) change some industries fundamentally, (ii) accelerate trends that were already underway in others, and (iii) open opportunities for novel industries to emerge, as typically happens in times of wars and natural disasters (e.g., Sine & David, 2003). Given the uncertainty and breadth of the COVID-19 shock, work and organizational psychologists urgently need to apply the field’s current knowledge for the purpose of sensemaking to help individuals and organizations manage risks while simultaneously developing and applying solutions.

Although it is possible that an effective vaccine or therapeutic treatment becomes available quickly enough to limit the direct impacts of COVID-19 to less than a year, a look at human history is filled with cases where pathogenic microbes have wreaked long-lasting havoc on societies and workplaces (Diamond, 1998). As an example, between 1918-1920, the Spanish flu killed an estimated 50 million people worldwide, many of them adults between the ages of 20 and 50 years. In response, many countries adopted policies to improve health and working conditions by providing either universal health care (Europe) or employer-based insurance

schemes (US). More generally, the financial and health impacts of infectious disease have been linked to tighter cultural norms and practices (Gelfand, 2019), political conservatism and xenophobia (Ji, Tybur & Van Vugt, 2019), and more directive workplace leadership (Van Vugt, Hogan, & Kaiser, 2008). It is also known, when considering other recent systemic shocks such as the 9/11/2001 attacks in the United States, that such shocks can produce long-lasting global changes in practices and attitudes towards surveillance, security, and privacy.

This article focuses on the relevance of COVID-19-related risks and changes for workers, workplaces, and work practices. This broad survey of topics allows us to identify a variety of economic, social-psychological, and health-related risks that workers appear likely to face as either a direct result of COVID-19 or indirectly as a result of economic shutdowns associated with COVID-19 (given that research on prior economic contractions suggests may have adverse – and lethal – health effects [e.g., Popovici & French, 2013]). By focusing on topics that appeared most likely to be influenced by COVID-19 during early and midterm stages of the pandemic, we organized ourselves (as described in the Supplemental Material) to present a review of relevant literatures along with an evidence-based preview of changes that we expect in the wake of COVID-19 for both research and practice. To organize our consideration of the multiple ways in which the current pandemic is impacting the workplace, this review consists of three main sections (each with three main topical areas): (1) emergent changes in work practices (work from home; virtual teamwork; virtual leadership and management); (2) emergent changes for workers (social distancing and loneliness; health and well-being; unemployment and inequality); and, (3) the importance of moderating factors (demographic characteristics; individual differences; organizational norms).

Beyond reviewing and applying prior research to help make sense of the crisis, this article aims to provide a generative overview to help situate and guide future research and theorizing on the impacts associated with COVID-19. In addition, this effort is designed to help researchers and practitioners take steps to manage and mitigate the negative effects of COVID-19 with evidence-based roadmaps for moving forward. Given the wide-ranging impact of COVID-19, this article's focus on work and organizational psychology is intended to be broad and inclusive; however, there are inevitably additional "workplace" topics that may have inadvertently been omitted.

Emergent Changes in Work Practices

At the same time that COVID-19 abruptly upended normal work routines, it also caused an acceleration of trends that were already underway involving the migration of work to online or virtual environments. A key difference, though, is that WFH was previously often responsive to employee preferences but COVID-19 forced many into Mandatory Work From Home (MWFH), making it difficult to generalize prior findings.

Work from Home (WFH). A Gartner (2020) survey of 229 Human Resources (HR) departments showed that approximately one-half of the companies had more than 80% of their employees working from home during early stages of the COVID-19 pandemic – and estimated substantial long-term increases for remote work after the pandemic. The need for millions of workers to WFH in response to COVID-19 has accelerated recent remote work trends facilitated by the rise of connectivity and communication technologies. While "remote work" is a broader category since it can include Work From Anywhere (i.e., not necessarily home), it is known that some – such as professionals who need to perform complex tasks that require little interaction with peers – actually prefer and are more productive if they WFH (Allen, Cho, & Meier, 2014).

Yet as large numbers of workers are forced to work from home, many face challenges due to such fundamental issues as not having space in one's home to attend to work. For example, employees who live with others also face a larger set of challenges than those who live alone since they need to navigate others' space as well (see later section on Moderating Factors).

Employees often find it challenging to maintain boundaries between work and non-work (Ramarajan & Reid, 2013). The forced confinement of workers during the COVID-19 pandemic has further complicated this issue. While WFH might sound appealing if it offers a safe harbor, the absence of separation between one's work and home – and the lack of commutes to provide a transition between the two domains – can become a burden too. Questions that would benefit from closer study include: how do individuals' experiences in the work and non-work domains influence each other, and how do individuals' work and non-work identities interact, when they unfold at home?

Given the likelihood that COVID-19 will accelerate trends towards WFH past the immediate impacts of the pandemic (Gartner, 2020), it is clear that the diversity of work arrangements will need to be studied. Future research should examine whether and how the COVID-19 quarantines that required millions to work from home affected work productivity, creativity, and innovation. Given that quarantine periods have entailed literal windows into the homes of co-workers as well as subordinates and superiors, research is also needed to examine the implications of WFH for topics such as motivation and authenticity at work, particularly when it becomes normal again to work in co-located workplace settings.

Independent from challenges that individuals can face when WFH, it is also notable that (a) the reluctance of many employers to adopt WFH before COVID-19 stemmed from a perceived lack of control that employers would have over employees who were out-of-sight and

–reach and (b) there is ample reason to expect that new modes of surveillance will accompany various WFH arrangements. Indeed, even before COVID-19, employers were adopting and developing technologies to monitor employees’ whereabouts (e.g., with sociometric sensors) (Bhave, Teo & Dalal, 2020). Although managing-by-walking-around is not feasible when people are working remotely, the rapidly expanded usage of videoconferencing has allowed for virtual sight-lines. Yet these virtual sight-lines are fraught with a risk as they increase perceived stress and invade privacy. There is also evidence that such remote and automated monitoring can lead to the centralization of decision-making and (in the absence of countervailing action) contribute to lower creativity among employees working in lower organizational levels (Nell et al., 2020).

Virtual Teamwork. As Mak and Kozlowski (2019) observed *before the pandemic*, “Virtual teams ... are growing in number and importance.” Rather than assume uniformity in virtual team characteristics, though, it is valuable to recognize that “team virtuality” is a multifaceted concept and encompasses multiple dimensions including the geographical distribution of team members and the relative amounts of (a)synchronous e-communication (Hoch & Kozlowski, 2014). Indeed, a nuanced conceptualizing of virtuality – as a continuous variable, given that teams are not simply *either* face-to-face *or* virtual – has already been developed (Mak & Kozlowski, 2019) and should prove helpful for future researchers who work to classify the different forms of virtual teamwork that have emerged.

Prior research shows that virtual teamwork tends to lack the communication richness available to face-to-face teams (Martins, Gilson, & Maynard, 2004) and that traditional teamwork problems such as conflict and coordination can escalate quickly (Mortensen & Hinds, 2001). Building structural scaffolds to mitigate conflicts, align teams, and ensure safe and thorough information processing are key recommendations for virtual teams. For example, prior

work has shown the need – especially in virtual teams – to formalize team processes, clarify team goals, and build-in structural solutions to foster psychologically safe discussions (e.g., Gibson & Gibbs, 2006).

Increased team virtuality as a result of COVID-19 may also affect helping and prosocial behavior. While physical distancing among co-workers may reduce helping behaviors in the near term, prior research has shown that people should be bolder to request help from others since people do tend to be more willing to help, and give better-quality help, than is usually assumed (Newark, Bohns, & Flynn, 2017), perhaps especially during crises. Normal impediments to requesting help center on the feeling that it can be uncomfortable, awkward, and embarrassing (e.g., Bohns & Flynn, 2010), but “best practices” in virtual helping can assist help-seekers in overcoming these psychological barriers by maintaining personal privacy (Cleavenger & Munyon, 2015), reducing stigmatization (Ben-Porath, 2002), and instilling hope that things will get better once help is received (McDermott, et al., 2017).

As COVID-19 has accelerated the expansion of virtual teams, it will be valuable for researchers to track and study innovations that may enable such teams to function optimally. For example, the intersection of remote work with a global crisis brings up questions of how emotions, such as anxiety and stress, can best be communicated and regulated in the unique setting of virtually connected work where social and emotional cues are relatively limited (for an overview, see Lindebaum, Geddes, & Jordan, 2018). On the other hand, there are prior studies showing that teams operating online tend to be more effective at brainstorming than face-to-face teams (e.g., DeRosa, Smith, & Hantula, 2007). In contrast, research focused on individual performance has shown that remotely-interacting teammates appear to miss the creative benefits that can flow from frequent face-to-face interactions (Allen, Golden, & Shockley, 2015). The

rapid growth in virtual teams offers an opportunity to examine new questions as well as develop interventions to help improve teamwork in virtual settings; and, in that pursuit, close attention needs to be paid to the multidimensional ways in which virtuality varies among remote teams (Mak & Kozlowski, 2019). The burgeoning area of research on teamwork in healthcare settings (e.g., Salas, Reyes, & McDaniel, 2018) where doctors and nurses in emergency rooms have long been working with each other behind masks offers a valuable model for teamwork that is not directly face-to-face.

Virtual Leadership and Management. The role of leaders to determine organizational outcomes that have a broad impact on employees at all levels is especially clear in the crucible of a crisis and certainly vital in fundamental ways. With the COVID-19 crisis requiring millions of employees across different hierarchical levels to work from home, it is reassuring to know that leadership can also work effectively from a distance (Antonakis & Atwater, 2002). Prior research shows that successful leaders are those skilled in a domain to make the right decisions and provide reassurance through a balanced mix of optimism and realism regarding the future. In other words, effective leaders strive (in any time period) to project vision – a symbolic state of affairs with which the collective identifies – and to reify it (Antonakis et al., 2016). Another possibility, which future research should examine, is that the move to high-virtuality work arrangements will foster more participatory relationships given that physical cues of dominance (e.g., size) are less salient in virtual environments.

Research on the effectiveness of leaders during and after the COVID-19 crisis should examine an array of activities, including the degree to which remote leaders are persuasive if they (a) clearly state their values that will guide institutional actions; (b) understand and openly discuss the travails and hopes of their collectives; (c) clearly communicate an ambitious vision of

the direction that the unit will head toward; and, (d) demonstrate confidence that strategic goals can be achieved. These skills are referred to as charisma (Antonakis, et al., 2016) and require domain expertise as well as training and investment. Indeed, crises can bring about changes in leadership styles (Stoker, Garretsen, & Soudis, 2019); thus, firms can expect to be better prepared by ensuring that they have adequately invested in professional development. Future research should estimate if and how organizational commitments to employees' professional development during the crisis pay later dividends. At a more basic level, it will be important to assess how COVID-19-induced changes in training programs (i.e., moving online) will affect the accessibility, efficiency, and efficacy of such programs (Cascio, 2019; Salas et al., 2012).

Among the more specific leader-subordinate activities that will be important to consider in relation to COVID-19 is how assessment and appraisal systems will function. For example, without being able to directly monitor subordinates in the way that office settings allow, there may be a shift to results-focused assessment, which prior research shows to be generally effective (Pritchard et al., 2008). Over longer spans of time, though, working remotely may reduce the opportunities for subordinates to gain feedback from leaders and prior research suggests that a lack of learning opportunities is associated with lower organizational commitment and higher risk of turnover (Vandenberghe et al., 2019). In addition, future research should examine how trust can be built remotely with online interactions so that newcomers are not disadvantaged due to the lack of face-to-face interactions with their supervisors (Dunbar, 2018).

Emergent Changes for Workers

In addition to the immediate impact of COVID-19, there is also likely to be a diverse range of social-psychological, health-related and economic costs of the pandemic for individuals, including for those (a) whose work was made virtual or remote, (b) who continued as “essential”

workers, and (c) who were laid-off either temporarily or permanently. While the previous section on work practices focused on those whose work was made virtual, this section as well as the rest of this article have broad relevance for everyone affected by COVID-19, including essential workers and those who have been laid-off.

Social Distancing and Loneliness. The loss of social connections – for those who were laid off and those required to WFH is likely to negatively impact workers. Prior research has shown that high-quality social interactions – including informal chats among co-workers – are essential for mental and physical health (Mogilner, Whillans & Norton, 2018). Handshakes that are also known to be valuable for social connection (e.g., Schroeder et al., 2019) are now restricted. Against this backdrop, both the requirement to WFH and plans to de-densify workplaces in support of physical distancing are likely to have side effects that include at least some degree of harm to individuals' mental and physical health (Brooks et al., 2020).

More insidious than the loss of social connections, loneliness is a psychologically painful emotion that results from people's subjective feelings that their intimate and social needs are not adequately met (Cacioppo et al., 2006) and was already considered “an epidemic” (Murthy, 2017) prior to this pandemic. Workplace loneliness has been shown to have strong negative relationships to employees' affective commitment, affiliative behaviors, and performance (Ozcelik & Barsade, 2018). While we noted that virtual communications lack richness, a more negative risk of communications going online is that misunderstandings – in the absence of non-verbal cues – are likely to increase employees' concerns about being interpersonally rejected, contributing to loneliness (Cacioppo et al., 2006).

As organizations look ahead, prior research recommends that workplace loneliness be acknowledged and addressed as an indicator of employee well-being in HR policies, programs,

and practices. Close study of innovations that people started initiating within weeks of mandatory shutdowns (e.g., virtual lunch meetings) would also be valuable for informing future practice as well as research intended to help prevent loneliness and increase resilience. Such investigations would complement recent work focused on developing resilience through experimentally tested interventions (Williams et al., 2018).

Health and Well-being. Given the uncertainties of the pandemic, organizations need to actively support the health and well-being of employees. Building on Job Demands-Resources (JD-R) theory (Bakker & Demerouti, 2017), it is notable there is variation across and within industries with respect to how COVID-19 has affected both the demands and resources of different jobs. There is evidence suggesting that working conditions have deteriorated for many employees. In light of such strains, COVID-19 has contributed to greater risk of employees encountering job burnout – a chronic stress syndrome, including permanent feelings of exhaustion and a distant attitude toward work (Demerouti et al., 2010). Moreover, the continuous exposure to COVID-19 media news fosters rumination – repetitively and passively focusing on symptoms of distress and on the possible causes and consequences of these symptoms (Nolen-Hoeksema et al., 2008). Past studies have shown that people who were exposed to Hurricane Katrina had above-baseline stress and depression symptoms a year after the event (Obradovich et al., 2018), indicating that mental health problems may remain long after a crisis.

In order to adequately deal with pandemic-specific and generically uncertain job demands, employees will need resources. To help address this, organizations may use top-down (or may facilitate bottom-up) interventions to take care of employee health and well-being with a goal to restore balance between job demands and resources. As a starting point, organizations and their leaders should consider providing (a) immediate tangible resources, such as

information (e.g., about working from home, prevention of transmission), employee assistance programs (EAPs), or access to counseling, therapy, and training; and (b) psychological resources such as feedback, support, and inspiration through regular contact with their employees using video calls. Research that tracks and identifies which variants of such efforts are most effective will yield benefits beyond the systemic shocks of COVID-19. In addition, future research should determine whether structural efforts to optimize working conditions via job redesign and job crafting can be as effective now as compared to pre-COVID-19 (Oprea et al., 2020).

More immediate than many forms of stress, COVID-19 draws close attention to the problem of presenteeism (i.e., people going to work when ill) (Johns, 2010). From prior research, there is ample evidence that sick people do persist in going to work, especially in parts of the US where paid sick leave is not presently mandated (e.g., Pichler & Ziebarth, 2017) and especially among those who are highly engaged with their work and/or perceive very high job demands (Miraglia & Johns, 2016). Independent of policies regarding presenteeism, Dietz, Zacher, Scheel, Otto, and Rigotti (2020) found that work team members imitate the level of presenteeism exhibited by their supervisors. Compensation policies should also be reviewed in this context to help ensure that there are not incentives for co-workers to pressure each other to attend to work while sick (Kessler, 2017). Notably, for people with jobs that can be done remotely, research should examine how sickness is navigated in the post-COVID-19 workscape (e.g., to see if sick days or snow/weather days will be expected to be WFH days). Further, for employers that do take active steps to mitigate and guard against presenteeism, it will be important to monitor and assess the degree to which employee privacy rights are maintained as organizations assume the right to daily health checks.

As with stress and presenteeism, employee addiction-risk is another aspect of health and well-being that needs attention. While it is well known that traumatic events can precipitate societal shifts in addictive behaviors such as alcohol consumption (Vlahov et al., 2002), the COVID-19 pandemic is particularly concerning since massive unemployment and mandatory WFH orders may heighten vulnerabilities and thus trigger or exacerbate alcohol use disorders (i.e., alcohol abuse or dependence) – a diagnosis applicable to nearly 13% of Americans and 20% of Europeans (Grant et al., 2017). Prior research has shown that workforce disengagement can be associated with a decrease in alcohol misuse due to distancing from workplace-based norms to drink (Bamberger & Bacharach, 2014). There is also evidence, though, that proximity to work-based peers and supervisors (which is largely absent when employees WFH) can provide essential stress-attenuating support in times of crisis that can prevent alcohol-based coping (Bacharach, Bamberger & Sonnenstuhl, 2002).

Beyond traditional EAPs, peer assistance programs including union-sponsored (e.g., AFA's member assistance program), joint labor-management-sponsored (e.g., UAW-Ford ESSP), and employee-initiated (e.g., Google's Blue-Dot) programs have shown particular efficacy in times of crisis (Golan, Bacharach & Bamberger, 2010), not only for those actively employed, but for those disengaged from work as well (Bamberger & Bacharach, 2014). Practitioners can also consider internet-based brief interventions incorporating personalized norm-feedback (demonstrating, for example, that the individual's drinking behavior is excessive relative to his/her cohort) and/or textual or video-based insights for addressing the kinds of negative emotional states potentially driving alcohol-based self-medication since both kinds of approaches have also demonstrated efficacy (Brendryen et al., 2017). As face-to-face support

becomes scarce, personalized and adaptive virtual technologies may well offer an important new means to assist workers.

Unemployment and Inequality. As entire industries such as travel, hospitality, sports, and entertainment were shut down by COVID-19, millions of people in the United States alone filed new unemployment claims in early 2020. In addition to losing income, individuals who are unemployed may experience a range of stress-related consequences including depression, anxiety, and physical ailments (Wanberg, 2012). Jahoda's (1982) latent deprivation model helps explain the negative effects of unemployment on psychological well-being by acknowledging that employment provides both manifest (e.g., income) and latent (e.g., time structure, social contact, sharing of common goals, status, and activity) benefits. Financial deprivation can be particularly devastating, triggering a spiral of adversity that can affect the entire family (McKee-Ryan & Maitoza, 2018).

Hopes related to COVID-19 unemployment have centered on an economic recovery unfolding fast enough that jobs lost to COVID-19 unemployment will largely be regained but that is far from certain. The broad-based closures associated with COVID-19 have further complicated typical advice for individuals who are unemployed to develop a regular routine of job search (Wanberg, Ali, & Csillag, 2020). Researchers studying unique features of COVID-19 will want to compare how people cope and adapt to the shocks entailed by COVID-19 in both the near-term with respect to the employer that let them go and, in the longer term, where career adaptability (Klehe et al., 2012) – the willingness and interest to explore new options and future work scenarios – might prove to be increasingly valuable.

In addition to the consequences of unemployment for individuals, there are negative spillover effects for those who remain employed. Prior research shows that when firms reduce

overall staffing levels, there tends to be correspondingly lower levels of organizational commitment, job involvement, and greater stress among survivors (Trevor & Nyberg, 2008). Meta-analytic evidence finds that overall reduction in staffing has roughly the same adverse organizational performance as comparable voluntary turnover (e.g., Park & Shaw, 2013). Recent research has also shown that broader economic downturns tend to be associated with a shift towards more “zero-sum” mindsets with a downstream consequence that people become increasingly prone to misconstrue others as competitors even when they are not (Sirola & Pitesa 2017). Future research that examines the mass layoffs entailed by COVID-19 should test the extent to which prior research holds up in the face of the wide, broad, and abrupt layoffs.

As a broader cost associated with the pandemic, many analysts expect that inequality will increase in the wake of COVID-19 just as it has in recent shocks such as the 2008 financial crisis (Wisman, 2013). Such inequalities are known from past shocks to provide differential resources and opportunities for individuals to gain employment and promotions while exacerbating inequalities in pay and benefits (Bapuji, Ertug & Shaw, 2020). In relation to COVID-19, it seems likely that there will be continued growth in short-term jobs given that – even prior to the pandemic – the so-called gig economy (Ashford, Caza & Reid, 2018) was growing at a high rate (McKinsey & Co, 2016) as a new kind of normal (Petriglieri, Ashford, & Wrzesniewski, 2019).

Given prior work showing that organizational and societal inequalities feed into each other, there are reasons to be concerned that growth in inequality after COVID-19 will contribute to a downward spiral of negative trends in the workplace in the form of decreased work centrality, and increased burnout, absenteeism, deviant behaviors, bullying, and turnover (Bapuji et al., 2020). Further, it is likely that job insecurities post-COVID-19 will motivate greater risk-taking and presenteeism among low-paid workers that, in turn, may increase public health risks

for further spread of the disease. Finally, societies may be confronted with social unrest and political upheaval (e.g, demonstrations, riots) as social and economic inequality increases on the back of COVID-19. Therefore, greater organizational investments to minimize inequality should dampen the negative spiraling that is otherwise likely to unfold.

Moderating Factors

The changes and impacts reviewed in the previous two sections will disparately impact (and be impacted by) employees with certain demographic characteristics, individual differences, and variable organizational norms. While the following subsections focus on moderators for which there exists evidence relevant to COVID-19, there are ample reasons to expect that these interact with additional factors such as a person's socio-economic or their health status (i.e., chronic illnesses). These moderators are key concerns if organizations are going to maintain pre-COVID-19 commitments to diverse, inclusive, and equitable workplaces.

Demographic Characteristics. Preliminary analyses of COVID-19 indicate that older people are disproportionately at-risk of dying if they are infected thereby warranting substantial attention to aging workers. Declining birthrates and increasing life expectancy in the past century has led to an aging workforce across the globe (Rudolph, Marcus, & Zacher, 2018). Given the health risks faced by older employees as well as early retirement incentives that organizations dealing with budget shortfalls are expected to offer, it is possible that the post-COVID workplace is less diverse with respect to age. Older employees' decisions in relation to COVID-19 seem likely to be influenced partly by the status of their retirement savings or benefits; and, certainly, there will continue to be more heterogeneity in countries where there is not a mandatory retirement age (e.g., Van Solinge & Henkens, 2014).

Similar to age, fatality rates for contracting COVID-19 have also varied substantially by race (e.g., within the U.S.) with speculation that the racial differences reflect underlying differences in pre-existing health conditions, lower socioeconomic status, and dense living conditions. Additionally, members of racial and ethnic minority groups are less likely to be able to work remotely and as a result face greater exposure to the virus. In the UK, healthcare professionals from Black, Asian, and Minority Ethnic (BAME) groups represent 20 percent of nurses and midwives and 44 percent of doctors and dentists (Cook, Kursumovic, & Lennane, 2020); however, 70 percent of healthcare professionals who have died from the virus come from these same groups with similar patterns visible in the United States (Cookson & Milne, 2020). Although much is known about bias and discrimination in the workplace, less is known about how to mitigate them. To date, organizational scholars and psychologists have proposed individual-level coping strategies (Smith et al., 2019), interpersonal identity management strategies (Creary, Caza, & Roberts, 2015), and organizational-level interventions such as diversity training (Nkomo & Hoobler, 2014) that can improve racial and ethnic minorities' experiences at work. Missing from the literature is an understanding of whether these strategies are similarly effective under conditions of economic threat when racial and ethnic minorities are particularly vulnerable to layoffs (Elvira & Zatzick, 2002). Not only should scholars who are legally able to collect racial and ethnic data continue to do so during and beyond this pandemic, organizational and managerial interventions aimed at improving the workplace conditions and experiences of racial and ethnic minorities including their experiences of inclusion (Roberts, Mayo, & Thomas, 2019) and belonging (Good, Rattan, & Dweck, 2012) will be valuable.

As with age as well as race and ethnicity, COVID-19 likely affects gender in a variety of ways. Higher fatality rates for men imply that male workers might need greater physical

protection from the virus; however, there are economic and psychological reasons to suspect that women face greater occupational risks. First, women tend to work in positions that are more directly affected by COVID-19 and more easily replaceable (e.g., hospitality, cleaning, and domestic work) (Alon et al., 2020). Second, since women tend to have higher empathy (Bloise & Johnson, 2007), women tend to experience more distress from stressful life events, particularly the ones affecting others (Kessler & McLeod, 1984). Globally, several female leaders (e.g., Angela Merkel, Tsai Ing-wen) have tackled COVID-19 effectively. Whereas this contrasts with prior research indicating that people prefer a masculine leader in times of crisis (e.g., Van Vugt et al., 2008), a set of feminine values and traits can also be effective in crisis management, including: a communal orientation in moral decision-making (Tinghög et al., 2016); higher sensitivity to risk (Eckel & Grossman, 2008), particularly about health issues (Flynn, Slovic, & Mertz, 1994); higher conscientiousness (Schmitt, Realo, Voracek, & Allik, 2008); and, more attentive communication styles (Campbell, 2013). Combining these insights, it is plausible that a feminine style of leadership might become recognized as optimal for dealing with crises in the future.

Finally, individual family status (e.g., living alone; with others; with young children) appears likely to disparately affect how COVID-19 impacts individuals' life and work. For example, research has shown that, in heterosexual couples, women typically do the majority of household work, and this can lead them to opt-out of careers (Stone, 2008). Given that partners are known to play a key role in supporting (or undermining) each other's careers and developing professional identities (Petriglieri & Obodaru, 2019), it will also be key to understand how couples manage the emotional labor of dealing with anxiety provoked by the pandemic. Among interventions specific to families that researchers will want to want to understand more closely

are the conditions and ways in which revisiting psychological contracts among couples – perhaps especially among couples with (young) children – is beneficial (Petriglieri, 2019).

Individual Differences. The Big Five personality traits predict many work attitudes and behaviors, including those relevant to COVID-19, such as coping (Connor-Smith & Flachsbart, 2007), work-life balance (Michel et al., 2011), and subjective well-being (Anglim et al., 2020). Second-order quantitative reviews of 90+ meta-analyses show that Extraversion and Conscientiousness play particularly important roles in successful adjustment. Extraversion contributes to adjustment by promoting more frequent experiences of higher levels of positive emotion as well as a richer repertoire of interpersonal skill (Wilmot et al., 2019) whereas Conscientiousness contributes to adjustment by fostering commitment and perseverance toward more predictable, non-immediate work goals (Wilmot & Ones, 2019).

In light of this prior research, there are reasons to expect that both traits play key but distinct roles in workplace adjustments to the COVID-19 pandemic. For example, the need for distancing among people may heighten tendencies toward Introversion, which, in turn, have been associated with diminished positive emotions (Margolis & Lyubomirsky, 2019). Furthermore, while Conscientiousness offers potent workplace benefits, we know that unpredictability increases job complexity, which, in turn, decreases conscientiousness' beneficial effects (Wilmot & Ones, 2019). Accordingly, organizational interventions that facilitate social engagement in spite of physical distancing and bring role clarity as well as specific goals may offer much-needed predictability in an uncertain time.

Beyond the Big Five traits, other individual differences may also matter. For example, regarding WFH, Rothbard et al. (2005) report that "segmentors" tend to enjoy work and perform better when they have a clear boundary between work and non-work, whereas "integrators" tend

to flourish when toggling between different activities across these boundaries. This distinction is useful because each may benefit from different adaptations in their work routines. Segmentors, particularly those who live with others, may benefit from strategies that enable them to tolerate non-work interruptions during work hours, whereas integrators may benefit from some segmentation in time and space.

Organizational Norms. While cultural variation around the globe can be classified on numerous dimensions, the dimension of cultural tightness-looseness (TL), which is comparable to classifying cultures as relatively collectivist or individualist (Hofstede, 1984), appears most relevant for making sense of COVID-19 since it explains how human groups develop strong norms and tighter organizational cultures in reaction to life threatening-experiences (Harrington & Gelfand, 2014). More specifically, prior research suggests that cultural tightening – with advantages that include greater social order, efficiency, and directive leadership – becomes more adaptive during a crisis, but is perhaps more maladaptive as recovery becomes timely and looseness and its associated creativity are needed. Historically, nations with more infectious disease threats are culturally tighter and, as a result, less innovative (Gelfand, 2019).

In anticipation of eventual recoveries from the COVID-19 shutdowns, organizations will need to find the right balance between an overly tight or loose culture, known as tight-loose ambidexterity (Gelfand, 2019). Accordingly, as many workplaces tighten in response to their shaky economic standing, successful organizations will benefit from having flexible tightness – rules which bind employees together to prevent social isolation and loneliness, accompanied by the right dose of looseness, which affords employees latitude and autonomy where possible. It is clear that as the effective tightness or looseness of a given organization's culture changes as it deals with COVID-19, there will be associated changes in the ways that employees navigate

other dimensions that were examined in previous sections. For example, in culturally tight organizations (e.g., hospitals, airlines), team creativity and innovation may be fostered by allowing teams to interact virtually, whereas culturally looser organizations (e.g., universities) might profit from a greater concern with health and safety regulations, as a result of COVID-19.

Among other dimensions of cultural difference that are valuable to consider in relation to COVID-19, it is notable that just as research shows that infectious diseases can help cultivate political conservatism and xenophobia (Ji et al., 2019), it is logical to anticipate that sociocultural differences (e.g., in collectivism) help explain how people and organizations *responded to* COVID-19. While analysis of these kinds of cultural difference are outside of this article's scope, future research should consider how employees' and organizations' responses to COVID-19 might have been influenced by their values, political affiliations, and/or other traits.

Discussion and Conclusion

For this project, we organized ourselves as a large and diverse virtual team of researchers to make sense of COVID-19 for questions of relevance to work and organizational psychology. As is known from prior research on teamwork among scientists (Kniffin & Hanks, 2018), the benefits of this approach – since many hands make light work and many heads are better than a few – are obvious, especially as we are dealing with an urgent phenomenon, COVID-19, of seismic proportions. Nevertheless, it is also certain that this overview is limited and we may have missed some trends or developments that later turn out to be significant. Among the many current unknowns, it is not yet known how badly the global economy will be affected and how quickly it will recover. It is also not yet known if and when there will be a vaccine or effective medicine available nor how widely and quickly it will be distributed.

Notwithstanding the unknowns, it is obvious that COVID-19 will be recognized for changing the ways people work in fundamental ways (see Table 1 for an overview of the implications, issues, and insights we have considered in this article). For example, COVID-19 abruptly accelerated the speed of changes associated with working outside of co-located settings. Virtual work practices are likely to spread as organizations realize the cost-savings from structuring labor with fewer full-time employees and more contractors connected technologically (Spreitzer, Cameron & Garrett, 2017) – and perhaps with less office space in light of the health risks known to be associated with conventional open-plan offices (Pejtersen et al., 2011). The challenges for individuals working in this manner are clear: more people will need to learn to work in ways far different than how previous generations worked. In this respect, COVID-19 makes clear the vulnerability that employees and employers face. As many businesses around the world will be restructured or disappear due to the pandemic, workers will be retrained or laid-off and the economic, social-psychological, and health costs of these actions are likely to be immense. Indeed, the impacts of the pandemic will affect some groups of workers more strongly than others, for example, based on their age, race and ethnicity, gender, or personality.

An understanding of how these abruptly emergent changes unfold is important for practitioners who are charting paths forward to address (e.g., with new interventions) the needs of vulnerable categories of employees. For instance, workers living alone may have very different virtual working needs and routines than employees living with family members. Also, more authoritarian or bossy leaders may face different challenges in motivating their workers in virtual environments than more participative and empathic team leaders, and thus have different training and development needs. Finally, in dealing with remote working populations, HR professionals must develop new performance management and appraisal systems while

occupational health staff should be trained to recognize mental health issues in remote working populations – and be able to offer online advice and therapy.

There are also many challenges for research. Our preview of questions that seem likely to become important should offer generalizability beyond the COVID-19 pandemic given that “extreme events” often provide windows into identifying and understanding dynamics that are important but not necessarily visible during normal conditions. It is not yet known, for example, what the long-term impact of social isolation and physical distancing protocols will have for employees. Similarly, research on working from home has previously focused almost exclusively on people who opted into WFH by choice but MWFH is quite different. How will changes such as these affect job satisfaction and productivity?

To consider the long-term effects of COVID-19, organizational researchers should perhaps also delve deeper into history to learn about how epidemics and pandemics have been handled in the past. As Sir Winston Churchill once said: “The longer you can look back, the further you can look forward.” There are some parallels between the current crisis and previous threats such as WWII, the 9/11/2001 attacks, and the 2008 financial crisis. Yet COVID-19 is also unique since it is primarily a global health threat and thus requires a different set of adaptive responses (e.g., physical distancing instead of coming together). Therefore, theory development is needed on how different kinds of global threats and crises shape workplaces in varied ways. Infectious diseases have been a common aspect of human evolution and have shaped our psychology, behavior, and culture in surprising but predictable ways. As people now live and work in globally interdependent communities, infectious disease threats such as COVID-19 need to be recognized as part of the workscape. To continue to reap the benefits from global cooperation, it will be necessary to find smarter and safer ways of working together.

Table 1. Summary of Implications, Issues for Future Research, and Insights for Action regarding COVID-19 and the Workplace

Domain of Work	Implications	Issues for Future Research	Insight-Driven Actions
<i>Emergent Changes in Work Practices</i>			
Work From Home (WFH)	The massive, abrupt, and mandatory (for many employees) switch to work from home (WFH) has required employees to adapt while employers have become more open to adopting the practice post-pandemic.	How will WFH policies affect employee attitudes and behaviors to their employers as well as their co-workers? How will employee attitudes to privacy and monitoring shift for work that is done outside of an office setting?	Employees should create rituals that allow transitions (in the absence of commuting) in order to manage the boundaries between work and home. Organizations should adopt and encourage routines that enhance trust while being attentive to the costs of increased monitoring.
Virtual Teamwork	Employees who are forced to work virtually for team projects have needed to navigate the indirect and direct conflicts that can result in performance losses.	How will emotion expression and communication in teams with either low or high virtuality affect outcomes? What factors will lead to helping and prosocial behaviors in teams with either low or high virtuality – and how will these impact outcomes?	Team members need to pay attention to the structure and nature of communication flows in order to manage them effectively. Organizations should provide opportunities for non-task interactions among employees to allow emotional connections and bonding to continue among team members.
Virtual Leadership and Management	Leaders are tested when presented with systemic shocks and must continue to project vision. Managers are faced with new challenges to supervise and cultivate the development of their	How will leaders adapt their styles in response to shocks such as the current pandemic? How can organizations create superior leader communication to	Leaders need to balance optimism and realism in their communications with employees while demonstrating skills such as charisma.

	subordinates from much greater distance than usual.	allow feedback and mentoring to happen effectively?	Organizations need to (continue to) invest in the development of current and potential leaders to build new skills to function effectively in new work settings.
<i>Emergent Changes for Workers</i>			
Social Distancing and Loneliness	WFH – and the re-organization of workspaces to ensure distance among people – is likely to hamper social connections and, in turn, negatively affect employee mental and physical health.	How can organizations foster high-quality social interactions among co-workers when WFH or working in de-densified workplaces? What innovations are most effective for mitigating an increase in loneliness?	HR communications should acknowledge the risk of workplace loneliness and the value of social connections as part of broader employee wellness programming. Organizations should identify and implement policies and interventions to support social connections among employees.
Health and Well-being	Increased job demands and reduced resources are likely to lead to greater stress among employees. Among people serving “essential” jobs, there is likely to be an increase in people going to work when ill. Increase in substance misuse is possible during the pandemic and any	Does rumination about a major crisis like COVID-19 exacerbate the stress and preclude effective use of the available job resources? How can employer pay and benefit plans best be structured to discourage people going to work when ill? What is the efficacy of internet-based, brief interventions in preventing the onset and/or exacerbation of alcohol misuse among employees?	Leaders should be trained to facilitate job crafting so that employees can better cope with new and uncertain job demands. Employers should not incentivize employees to work through illness. Leaders should model appropriate behavior and not attend work when ill. With appropriate consent and attention to privacy issues, organizations should invest in machine learning and wearable

	subsequent economic downturn.	What is the impact of the relaxation of COVID-19 restrictions on alcohol misuse and addictions more generally?	technologies designed to virtually and rapidly identify the onset or exacerbation of risky behaviors such as alcohol misuse.
Unemployment and Inequality	<p>The costs of unemployment are both economic and latent due to the loss of social structure, status, and social ties. There are also direct and indirect costs experienced by those who remain working in organizations that have laid off workers.</p> <p>Increases in inequality expected from the shock of COVID-19 are likely to lead to burnout, deviant behaviors, and withdrawals.</p>	<p>What is the impact of unemployment beyond mental health outcomes and how can the unemployed recover?</p> <p>What HR practices, policies, programs, and/or forms of support can alleviate the negative consequences of mass layoffs on those who remain employed?</p> <p>How can organizations best minimize the individual and organizational costs of broader social inequality?</p>	<p>Job searching requires resilience and persistence and job seekers should seek support and information from others.</p> <p>Job seekers should also prepare for a longer job search than would be the case with lower unemployment rates.</p> <p>Organizations need to reduce inequalities, by reducing selection biases in favor of the demographically privileged and taking action to prevent further negative spiraling of pay and benefits.</p>
<i>Moderating Factors</i>			
Demographic Characteristics	<p>Older employees face disparate health and economic risks related to COVID-19 with impacts on retirement planning.</p> <p>Members of racial and ethnic minority groups face disparate health and</p>	<p>How will organizations respond to age-specific concerns involving the risks associated with COVID-19?</p> <p>How do organizations foster inclusion and a sense of belonging among racial and ethnic minorities when the economy is uncertain and the threat of job loss is high?</p>	<p>Organizations should intervene to simultaneously (a) optimize employee human capital across the lifespan and (b) strengthen internal labor markets (e.g., through cross-age mentoring).</p> <p>Employers need to create an environment where all employees,</p>

	<p>economic risks related to COVID-19.</p> <p>Men are more likely to face direct health threats of COVID-19. Women are more likely to be affected by the adverse economic and social costs.</p>	<p>What is the value of feminine leadership styles in extreme crisis management, despite the documented preference for masculine leaders under crisis?</p>	<p>including racial and ethnic minorities, realize how they can contribute to the organization's goals.</p> <p>Greater value should be placed on alternatives to more masculine leadership styles that seem to be effective in relation to COVID-19.</p>
Individual Differences	<p>The impacts of social distancing and WFH vary for those who are higher (vs. lower) on Extraversion and Conscientiousness.</p> <p>Other individual differences may also matter, such as segmentors and integrators struggling with WFH.</p>	<p>How do personality traits – in particular, Extraversion and Conscientiousness – function in response to COVID-19?</p> <p>How will the pandemic diminish – or even reverse – the advantageous work relations typically associated with Extraversion and Conscientiousness?</p>	<p>Organizations should reduce unpredictability (i.e., provide clarity to job roles and work goals) to restore the benefits of Conscientiousness.</p> <p>“Segmentors” will need to tolerate non-work interruptions, whereas “Integrators” may benefit from segmenting time and space.</p>
Organizational Norms	<p>Norms will tend to be stronger and less flexible, leading to a greater tightness of organizational cultures, when the threat of infection is high. As the perceived threat of infection lowers, there will be a corresponding loosening of norms.</p>	<p>How do organizations effectively tighten and loosen (or “close” and “open”) in response to systemic shocks?</p>	<p>Leaders need to understand how to be ambidextrous regarding social norms, knowing when to deploy tightness and looseness as needed since the former offers protection and the latter facilitates creativity and innovation.</p>

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[SUPPLEMENTAL MATERIAL]**COVID-19 and the Workplace:****Implications, Issues, and Insights for Future Research and Action**

The current effort to focus on COVID-19 and the Workplace is partly modeled on Van Bavel and colleagues' (2020) engagement of COVID-19 in relation to topics such as how people tend to respond emotionally and interpersonally in situations of uncertainty and fear. Regarding the application of provisional-by-nature knowledge from the social and behavioral sciences to understanding and responding to COVID-19, we proceeded with the cautions recommended by Ilzerman et al. (2020). Indeed, similar to the case study method that is commonly taught in the classrooms of professional schools, we aspired to make the best possible decisions on the basis of available evidence to produce a holistic narrative (Baumeister & Leary, 1997). In fact, two fundamental goals of the current effort were (1) to support effective sensemaking amongst readers interested to navigate COVID-19 in relation to the workplace and (2) to provide means (through future research and practical actions) that preserve employee well-being and performance (see Combe & Carrington, 2015 for more on sensemaking).

The main article was conceptualized and co-organized by ..., ..., and ... with early-stage input also provided by ... based on decades of teaching and researching questions related to work and organizational psychology. More specifically, 23 topics were identified on the basis of discussions as well as consultations with textbooks in work and organizational psychology. While a more systematic or quantitative approach to determining which topics to include was considered, it was quickly recognized that textbooks written prior to COVID-19 could not have anticipated the wholesale changes effected by the pandemic. Consequently, with the benefit of

the three co-organizers' experiences designing and organizing upper-level "topics" courses in work and organizational psychology over the span of decades, the list of 23 topics corresponded roughly to the array of topics that would be covered in such a course with a specific focus on topics where we anticipated that COVID-19 would effect change (e.g., the mass and abrupt movement of work to home settings for work that can be done remotely).

After identifying the 23 topics, a diverse set of 24 researchers with expertise related to the topics were invited to write two paragraphs relating to (a) how current knowledge related to the topic can help make sense of the myriad impacts of COVID-19 on the workplace and (b) how future research and practice can best proceed through the application of current knowledge. 100% of the researchers invited by the co-organizers joined the effort and promptly wrote two paragraphs with related references within one week of their invitation. In two cases, the original invitee indicated that they would partner with either a long-time collaborator or a senior graduate student on the project.

After gaining a total of 46 paragraphs with related citations from the project's co-authors, the co-organizers then proceeded to synthesize the material and, in turn, realized that some of the initial 23 topics were better consolidated rather than considered separately. Indeed, the co-organizers worked in an iterative way with the full set of co-authors in support of synthesis and flow. After submission of original and revised versions of the team's work to *American Psychologist*, reviewers helpfully suggested additional consolidation in ways that were organizationally efficient without losing substantive thinking; and, in response to both rounds of review, the full set of co-authors collaborated in support of numerous improvements. In effect, our initial list of topics benefitted from several rounds of "selective retention" (Campbell, 1960) by the co-organizers and co-authors of the paper as well as the two generous reviewers and the

Editor-in-Chief. Through these processes, our initial efforts eventually resulted in the main article that features three topic-focused sections – “emergent changes in work practices,” “emergent changes for workers,” and “moderating factors” – with three themes featured in each of the sections.

In light of the main article’s ambitious scope, this Supplemental Material is intended to (1) provide a window into the processes that were followed (as noted above) as well as (2) offer interested readers a roadmap for further reading on the wide array of topics that are presented in the article. In Table 1 provided in this Supplemental Material, classical as well as very recent references on respective topics are provided to support further explorations by interested readers.

Table 1. Brief Annotations and Directions for Further Reading

Domain of Work	Further Reading
<i>Emergent Changes in Work Practices</i>	
Work From Home	<p>For earlier research on the consequences of employees in certain occupations working from home, see Bloom et al. (2015).</p> <p>For recent research highlight differences across countries with respect to the potential of working from home, see Saltiel (2020).</p> <p>For research on Work From Anywhere, see Choudhury, Foroughi, & Larson (2019).</p>
Virtual Teamwork	<p>For an early discussion of teamwork in virtual settings, see Huang et al. (2002).</p> <p>For recent research examining the potential influence of facemasks for interpersonal interactions, see Kniffin & Palacio (2018).</p>
Virtual Leadership and Management	<p>For more on the role of leadership in the crucible of crisis situations, see Antonakis & Day (2017).</p> <p>For more on the role of charisma for leader communications, see Grabo, Spisak, & van Vugt (2017).</p> <p>For recent research suggesting the relevance of physical size for interpersonal relationships, see Kniffin, Bogan, & Just (2019) and Knapen, Pollet & van Vugt, M. (2019).</p>

<i>Emergent Changes for Workers</i>	
Social Distancing and Loneliness	<p>For a discussion of social and psychological interventions to promote social distancing, see Van Bavel et al. (2020).</p> <p>For early work on the importance and power of asking for help as a way of increasing prosociality, see Flynn & Lake (2008).</p>
Health and Well-Being	<p>For recent empirical studies of presenteeism focused on the flu and showing that approximately 20% of people who are diagnosed with the flu do not take sick leave, see Imai et al. (2020) and Mikos et al. (2020).</p> <p>On the role of peer support in relation to substance abuse prevention and intervention, see Spicer & Miller (2005).</p>
Unemployment and Inequality	<p>For research on income inequality and health indicators across societies, see Pickett & Wilkinson (2015).</p> <p>For evidence showing higher stress-levels among the long-term unemployed, see Dettenborn et al. (2010).</p>
<i>Moderating Factors</i>	

Demographic Characteristics	<p>For early reports of age-related hostilities related to COVID-19, see Rudolph & Zacher (2020).</p> <p>For an earlier discussion of age in relation to employment dynamics, see Brooke & Taylor (2005).</p> <p>To complement details provided in the article:</p> <p>In the US, Black and Hispanic/Latino people represent 13 percent and 18 percent of the population, respectively, but are dying at nearly twice the rate of Whites in New York City (New York City Department of Health and Mental Hygiene, 2020). These statistics are unsurprising given that Black and Hispanic/Latino workers represent more than 60 percent of frontline workers deemed essential in New York City during the pandemic (New York City Office of the Comptroller, 2020).</p> <p>For earlier research on the role of family-related stress in relation to work, see Bhagat (1983).</p> <p>On the disparate impacts of household work on women’s professional careers, see Blair-Loy, 2003</p> <p>For preliminary findings on the gender-disparate consequences of COVID-19, see IPPR (2020) and Collins et al. (2020).</p> <p>For earlier research on the relationship between gender and work, see Gilligan (1982).</p> <p>For earlier research on the relationship between gender and empathy, see Eisenberg & Lennon (1983).</p>
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Individual Differences	<p>For earlier research showing lower levels of Extraversion (and Openness) in countries that have historically suffered from higher levels of infectious diseases, see Schaller & Murray (2008)</p> <p>For more on the functions of extraversion, see McCabe & Fleeson (2012).</p>
Organizational Norms	<p>For more on national differences in responding to the COVID-19 pandemic with a focus on the workforce, see Adams-Prassl et al. (2020).</p>

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