

Resilience in Times of Global Pandemic: Steering Recovery and Thriving Trajectories

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INTRODUCTION

Disasters, including earthquakes, wildfires, terrorist attacks, and infectious disease outbreaks, are catastrophic events that expose individuals to stress, disrupt community routines and dynamics, undermine infrastructure and businesses, and result in economic losses for a significant period (Bader, Schuster, & Dickmann, 2019; Bakić, 2019). The World Health Organization (WHO, 2020) declared the COVID-19 outbreak a pandemic in the early months of 2020 and classed it as a major disaster. This pandemic is unique, one of few catastrophic events in recent history to affect the entire global population, and its severity and long-term consequences will test individuals, organisations, communities, and nations in unprecedented ways.

The COVID-19 pandemic exemplifies an acute extraorganisational stressor, and it differs from chronic workplace stressors such as role overload or work-life conflict in terms of its magnitude, scope, and impact on personal, social, and organisational resources (Biggs, Brough, & Barbour, 2014). Acute stressors pose double-edged swords in occupational settings: on the one hand, they can be trauma-inducing and destabilise individuals and workplaces for an extended period; on the other hand, the stress responses these acute stressors trigger are often catalysts to positive adaptation and growth, that is, resilience (Liu, Ein, Gervasio, & Vickers, 2019). At the individual level, disaster resilience encompasses the range of positive and negative human reactions to the heightened stress caused by a significant adverse event, and is reflected on distinct trajectories (Fisher, Ragsdale, & Fisher, 2019; Tedeschi, Calhoun, Shakespeare-Finch, & Taku, 2018). A *survival* trajectory signals a stress

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response characterised by impaired cognitive and affective functioning in the immediate aftermath of exposure to an acute stressor. Over time and with adequate resources, this course may evolve to an upward recovery trajectory, or, in the absence of support, slip into *decline* (*survival-to-decline*). *Recovery* indicates a resilience trajectory wherein individuals restore regular psychosocial functioning following a temporary phase of impairment immediately after the disaster. *Thriving*, also labelled post-traumatic growth, is a resilience trajectory that may ensue from recovery, and reflects the capacity to rely upon and further develop personal and social resources in the aftermath of a disaster, resulting in positive adaptation. The latter trajectory occurs when individuals frame the crisis as an opportunity to generate new resources and grow, rather than as a threat to wellbeing which they must overcome and emotionally recover from (Fisher et al., 2019; Shakespeare-Finch, Bowen-Salter, Cashin, Badawi, Wells, Rosenbaum, & Steel, 2020; Tedeschi et al., 2018).

Scholars have defined resilience as the ability to bounce back from crises and to modify goals and behaviours to cope with changes in the environment, emphasising the adaptive principles underlying a recovery trajectory (e.g., Sutcliffe & Vogus, 2003). Others explored how organisations can support a thriving trajectory and identified the proactive and transformational keystones of resilience that enable individuals to continually develop resources (e.g., Nilakant et al., 2016). Resilience in the workplace is, therefore, a multifaceted and multilevel construct that signifies: a protective factor evolving from a set of personal attributes that allows individuals to restore a state of wellbeing following exposure to adversity (Bonanno, 2004; Southwick, Bonanno, Masten, Panter-Brick, & Yehuda, 2014); a dynamic cognitive-emotional process of utilising personal, social, and environmental resources to adapt to chronic and acute stressors (Fletcher & Sarkar, 2013; Shaw, McLean, Taylor, & Swartout, 2016); and the capability to proactively develop resources as preparedness factors to effectively cope with and even thrive in the face of adversity (e.g., Kuntz, Malinen, & Näswall, 2017; Vanhove, Herian, Perez, Harms, & Lester, 2016).

Irrespective of their predominantly restorative/adaptive or futureproofing/proactive precepts, contemporary perspectives of resilience consistently underline its part in human functioning and recuperation in the aftermath of a disaster (Bakić, 2019; Shakespeare-Finch et al., 2020). The immediate and protracted effects of disasters on workers' stress and health, along with the role of resilience as a personal resource that protects against their negative effects while also promoting post-traumatic growth, have attracted significant attention in the literature (e.g., Maitlis, 2020; Tedeschi et al., 2018; Walker, Malinen, Näswall, Nilakant, & Kuntz, 2020). Specifically, researchers have observed that even though people differ with regard to their personal resources, stressor appraisals, and initial stress responses when exposed to a

disaster, individual resilience trajectories tend to converge within workplaces over time (Carvalho & Areal, 2016; Nilakant et al., 2016). This suggests that an organisation may steer recovery or thriving trajectories by managing psychosocial risks and developing resources among employees and teams, thus, ensuring organisational-level resilience, or fail to support upward resilience trajectories among staff and contribute to its own survival-to-decline trajectory. Nevertheless, there remains significant imprecision around the risk and supportive factors linked to distinct resilience trajectories following a major disaster, and regarding the generalisability of these factors across disaster types.

The principal aim of this paper is to chart lines of inquiry for workplace resilience research and add to our understanding of general and disaster-specific psychosocial risks and resilience-promoting factors that uniquely shape resilience trajectories in organisations. To that end, the paper intersects the growing body of evidence on resilience and disaster response with data collected during the COVID-19 pandemic to explore the boundary conditions and generalisability of the extant research across disasters. Its starting point is an overview of the factors that account for inter-individual differences in stress appraisals and ensuing resilience trajectories following exposure to an acute stressor, clarifying the role of organisations in managing psychosocial risks and enabling resilience. Next, it discusses the findings from a qualitative survey conducted in a cross-sector sample of 61 New Zealand workers in the early months of the COVID-19 outbreak, uncovering worker experiences of pandemic-related stressors and of organisational crisis response. These results are juxtaposed with the psychosocial risks and support factors commonly identified in the resilience and disaster management literatures to ascertain the risks and resilience-promoting aspects that are unique to a disease outbreak, common across disasters, and how they influence resilience trajectories. The final section of the paper integrates these findings with resilience development research and recent scholarly accounts of psychosocial risks associated with the COVID-19 pandemic to suggest employee-focused strategies that steer recovery and thriving resilience trajectories. Here, it is proposed that organisations can build resilience in the aftermath of a major disaster by helping employees reframe stressors and stress experiences uniquely related to the disaster, and actively engage with or further develop organisational resources to manage these stressors.

RESILIENCE IN THE WORKPLACE

While acute stressors such as natural disasters normally elicit trauma responses, the recovery trajectories that follow are contingent on initial appraisals of the stressor and of the existing resources to cope with it. Scholars have

recently suggested that individual appraisals of an acute stressor and its impact are likely disaster-specific, domain-specific, and the upshot of personal, social, and broader contextual factors (Bader et al., 2019; Fisher et al., 2019; Lim et al., 2020; Yao & Hsieh, 2019). For instance, an individual may perceive a global financial crisis as presenting a very different level of personal risk compared to an earthquake or a disease outbreak, and feel better equipped to deal with or even capitalise on one of these events compared to the others. Threat and opportunity appraisals linked to specific disasters may also differ between work and personal domains or be interpreted as equally impactful across the two domains. In either instance, the combination of personal characteristics and the social and organisational contexts in which individuals are embedded yield distinctive appraisals of a disaster, from evaluations of risk and threat level, to its interpretation as an obstacle to wellbeing or as an opportunity to grow. In essence, the initial appraisal of a stressor—overwhelming threat, manageable challenge, or opportunity—offers a strong indication of individual resilience and provides a starting point for estimating resilience trajectories following exposure to an acute stressor (Brunetto, Dick, Xerri, & Cully, 2019; Liu, Ein, et al., 2019). The next segments describe the suite of personal factors that contribute to individual resilience, stress appraisals following exposure to adversity, and the organisational factors that also influence these appraisals and shape resilient responses.

Individual Resilience Factors

Genes, emotional regulation, personality traits, affect, and early life experiences are depicted in the literature as individual factors that influence appraisals of adversity and resilient responses to challenges (e.g., DeSimone, Harms, Vanhove, & Herian, 2017; Hartmann, Weiss, Newman, & Hoegl, 2020; Kuntz et al., 2017). With respect to genes and neuroendocrine elements, elevated neuropeptide-Y (NPY) and a higher ratio of DHEA-to-cortisol have been linked to resilient responses following moderate or severe stress exposure (Yao & Hsieh, 2019). NPY regulates stress reactivity, and higher levels of NPY are associated to stress coping ability through regulation of heart rate, breathing, and arousal. Contrasting with heightened anxiety reactions, these measured physiological responses produce changes to the synaptic strengths related to negative memories, altering subsequent appraisals of adversity, and increasing resilience (Gan, Chen, Han, Yu, & Wang, 2019). This genetic component allows individuals to regulate physiological stress responses, which in turn proves advantageous in reframing stressful events as manageable challenges rather than overwhelming threats, and in facilitating adaptive responses.

Emotional regulation comprises another individual resilience factor that influences recovery following exposure to adverse events. High emotional

regulation is correlated with a greater sense of efficacy in dealing with challenges, improved immune function, the deployment of adaptive and proactive coping mechanisms, and the ability to secure social support as needed (Badu et al., 2020; Yao & Hsieh, 2019). Relatedly, positive affect and the experience of positive emotions denote personal resources associated with the capacity to handle crises. Positive emotions sustain constructive and pragmatic appraisals of challenging situations, guiding adaptive strategies, and supporting wellbeing (e.g., Fredrickson, 2001).

Further to emotional regulation and the capacity to draw on positive emotions to frame adverse situations as opportunities, personality traits and other personal resources linked to individual resilience include conscientiousness, emotional stability, openness to experience, and self-efficacy. Higher levels of conscientiousness are associated with increased ability and motivation toward goal persistence, and to carry out everyday duties through major disruption; emotional stability has been identified as a protective factor against anxiety and depression and related to effective coping capacity and strategies; higher levels of self-efficacy concerning one's ability to cope with challenges ensure task persistence in the face of adversity (Hartmann et al., 2020; Lyons, Schweitzer, & Ng, 2015).

Together, these individual resilience factors increase the likelihood that workers facing acute stressors are on track for recovery or thriving trajectories, compared to workers who possess lower levels of these attributes, through their positive effect on the appraisal component of resilience. Nevertheless, no person is impervious to the protracted and cumulative effects of chronic and acute stressors, as evidenced by post-disaster resilience studies showing that the availability of resources and psychosocial risk management in the organisation are key differentiating factors of workers' resilience trajectories following a crisis, through their impact on the positive adaptation component of resilience (Malinen, Hatton, Näswall, & Kuntz, 2019; Nilakant et al., 2016).

In the days and weeks after a disaster, it is standard for workers to go through the initial "heroic" and "honeymoon" periods of their resilience trajectory, characterised by a boost in team cohesion, increased sense of meaning and impact, and emotional growth (Brooks, Dunn, Amlôt, Rubin, & Greenberg, 2019). However, disasters often signify prolonged exposure to an acute stressor or to its effects. When organisations provide insufficient resources and support, and especially at lower levels of individual resilience, the cumulative effects of the acute stressor with daily stressors that characterise workplaces will prompt declining trajectories. Evidence from post-disaster research suggests that individuals exposed to the protracted effects of a disaster and to ongoing chronic stressors at work display sustained high cortisol levels. High cortisol levels deplete cognitive functioning, and along with sleep

disruption contribute to cardiovascular disease, lapses of attention and memory, and reduced immune responses accounting for lengthier recovery from minor illness and injuries (Heath, Sommerfield, & von Ungern-Sternberg, 2020; Helton & Head, 2012). These psychophysiological responses pose additional challenges for workplaces in the aftermath of a disaster, and signal the importance of identifying resilience-promoting factors that buffer against negative stress effects to enable recovery trajectories while sidestepping survival-to-decline trajectories (Heath et al., 2020; Mandavia & Bonanno, 2019).

Workplace Resilience-Promoting Factors

Recent scholarly works offer systematic, multilevel descriptions of resilience-promoting resources, spanning team, organisational, and extraorganisational levels of analysis (e.g., Hartmann et al, 2020; Hartwig, Clarke, Johnson, & Willis, 2020; Lim et al., 2020). The resources most frequently cited as resilience-promoting factors that develop capability and effectively address psychosocial risks include teamwork quality, a learning culture, participation in decision-making, flexibility, role clarity, ongoing feedback, clear organisational communications, peer and leadership support, and developmental opportunities (e.g., Cooke, Cooper, Bartram, Wang, & Mei, 2019; Kuntz et al., 2017; Lim et al., 2020). Carvalho and Areal (2016) submitted a longitudinal analysis of the financial performance of organisations dubbed “best places to work”. Workplaces that boasted high quality employee support performed better across sectors, irrespective of market conditions, some even over-performing in financial downturn periods. These findings are consistent with other research indicating that organisations provide the supportive resources listed above as part of their crisis preparedness strategy, pre-empting employees to develop a growth mindset and capabilities, which enables post-crisis recovery and thriving trajectories (e.g., Bader et al., 2019; Walker et al., 2020).

It is worth noting that scholars have recently exposed the paucity of guidelines for stress and resilience management in disaster contexts. This lack of direction has been credited to the limited availability of academic works that elucidate the complex interplay of: (a) individual resilience and stress responses; (b) unique psychosocial risks and temporal issues associated with varied disasters; and (c) organisational practices and systems that contribute to effective risk management and resilience development across disaster types (e.g., Bader et al., 2019; Caligiuri, De Cieri, Minbaeva, Verbeke, & Zimmermann, 2020). Hence, as disaster type represents a critical and seldom explored boundary condition that determines resilience trajectories, it is important to examine whether and to what extent the resilience-promoting factors identified in the research translate across disasters, including the COVID-19 outbreak. This next section examines data from a sample of

workers during the early stages of the pandemic and relies on this evidence to posit the generalizable and pandemic-specific factors that shape distinct resilience trajectories.

STRESS AND RESILIENCE THROUGH THE COVID-19 CRISIS

Qualitative Survey of Worker Experiences: Context and Rationale

On 19 March 2020, following the WHO's official announcement of the COVID-19 outbreak as a pandemic, New Zealand closed its borders and entry ports to non-residents. Two days later, the government announced a four-tiered alert level system to manage the outbreak in the population (Unite Against COVID-19, 2020), and on 25 March the country effectively moved to the highest alert level (Level 4—Lockdown). Under Level 4, people were instructed to stay at home, restrict interaction to their immediate family, and limit recreational activity to their area of residence. While essential services were open (e.g., supermarkets, pharmacies, and lifeline utilities), businesses and educational facilities only operated online. One month later, the alert level was moved down (Level 3—Restrict). This decision alleviated some of the restrictions, but it still meant that people legally had to work from home unless that was not possible, that businesses other than essential services could not provide services that required close personal contact (e.g., retail, hospitality), and healthcare services were advised to rely on non-contact consultations. These significant restrictions, which affected most businesses in the country, were lifted on 13 May, though the public and workplaces were advised to maintain physical distancing and enforce gathering size limits (Level 2—Reduce).

The data from the qualitative survey reported here were collected immediately following the transition from Level 3 to Level 2, as part of academic coursework carried out by a group of students to register timely accounts of workers' "lockdown" and "restrict" level experiences across sectors. This qualitative exercise explored the impact of the pandemic on individuals and workplaces, particularly its stress effects, the emergence or intensification of job demands, and the availability of suitable job resources (Biggs et al., 2014; Hochwarter, Laird, & Brouer, 2008). Essential and non-essential workers described their work experiences during the global pandemic, including the resources and support provided by their organisation.

Sample and Procedure

Primary data were collected from 61 workers throughout New Zealand during the month of May 2020. The sample included workers in managerial

(17) and non-managerial roles (44), and from several sectors, namely services (18), healthcare (14), food distribution (11), education (7), retail/hospitality (7), and manufacturing (3). Although only 29 participants were classed as essential workers, 52 reported working during Level 4 (lockdown), as 33 worked from home during this period.

Due to contact restrictions and other challenges in securing participants to volunteer their time for a virtual interview, a convenience sampling approach was carried out, whereby the large group of interviewers drew on their personal networks and each identified one eligible and willing participant. Participants were ensured that their interviewer would not share the recording of the interview or their name with anyone, including the author of this paper, who had no contact with the interviewees and received only detailed interview summaries with some emblematic quotes. Pseudonyms were used in lieu of names to ensure anonymity. The organisations identified by name in the interviews were anonymised in the analysis and grouped according to sector. Interviews lasted between 45 and 90 minutes.

The findings reported here result from the analysis of detailed interview summaries, rather than from interview transcripts, which represents a significant methodological limitation. Nevertheless, the study is one of very few to qualitatively capture the experiences of dozens of workers across different sectors and occupations during the early months of the COVID-19 pandemic, eschewing the limited exploratory potential associated with quantitative surveys. The interviews followed a structured format, and all the participants answered the following questions in order: (1) During the lockdown, what aspects of your job were the most stressful? Please provide examples; (2) How has your employer supported your health and wellbeing? (3) What systems/initiatives did your employer put in place to support staff through the lockdown?

The author of this paper analysed the interview summaries through a theoretical thematic analysis process. In a theoretical thematic analysis, the researcher codes data through the lens of a theoretical perspective of interest (e.g., workplace stressors and resources that influence resilience through a crisis), identifies themes by organising interviewee data into patterns of content, and interprets these patterns against the extant literature, and by attending to meanings and implications not previously theorised (Braun & Clarke, 2006). Each interview was assigned a number and classed by sector. Other categories within which the themes were nested included essential versus non-essential worker, performing the job during lockdown versus standing-by, and working from home versus performing the job at the usual place of work during lockdown. The analysis consisted in the identification of the *main work stressors* reported by the participants, and of the ways in which organisations had *supported and resourced* workers through the lockdown period, from essential

workers to individuals who had been unable to perform their role during lockdown. The next sections offer a summary of the findings and contrast workers' experiences of the pandemic with the wider corpus of evidence in the post-disaster resilience research.

Job Stressors during Lockdown and Transition to Restricted Alert Level

The New Zealand Government has been lauded in the international arena for its decisive and effective handling of the COVID-19 outbreak, which significantly reduced lockdown periods for individuals and businesses (The Guardian, 2020a). Despite the effective crisis management approach, the pandemic has had an indelible impact on workers and organisations. When asked about the aspects of the job they found most stressful in the period spanning the “lockdown” and “restrict” levels, the interviewees identified eight main stressors or demands: role stressors; managerial support and communication; technology; feeling unsafe at work; job insecurity; teamwork issues; customer/patient incivility; and work-life conflict. While most of these challenges intersected all sectors surveyed, some were specific to sectors or to job roles.

Role Stressors. About 74 per cent of the interviewees discussed increased workload, job complexity, and added time pressure as salient role stressors during lockdown and the transition to a restricted contact level. Participants reported a sense of overload, feeling they had to juggle multiple and growing responsibilities at work, often with insufficient time and psychological resources to perform them. In a disaster context, increased workload and job complexity are often accompanied by work intensification, working overtime, and time pressure (Malinen et al., 2019). In turn, the stress response induces a sense of physical and emotional depletion and reduced cognitive capacity to sustain task focus, impairing performance and decision-making quality, and further raising stress levels (Cooke et al., 2019; Heath et al., 2020; Helton & Head, 2012). If unmanaged, these role stressors steer a survival-to-decline trajectory.

Participants highlighted objective and subjective role overload, especially in the Education, Services, and Food Distribution sectors. The teachers interviewed unanimously reported that managing the transition from face-to-face to online teaching delivery, developing materials consistent with virtual delivery and assessment, and increased online contact time to provide academic support had resulted in information overload, which required them to work overtime. Workers in the Services sector, especially in corporate environments, noted that the swift move to unfamiliar software platforms, along

with unexpected or heightened client demands, forced them to work under significant time pressure and to put in longer hours to manage increased job complexity. Food Distribution interviewees reported increased time pressure to restock and control the flow of customers given the social distancing restrictions. Along with the Healthcare workers interviewed, mostly nurses, Food Distribution staff stated that understaffing became a significant source of role overload, due to updated Health and Safety guidelines that slowed or restricted routine work processes.

Managerial Support and Communication. Perceived lack of support from managers was experienced as a significant stressor by nearly half of the interviewees. Their accounts covered lack of clear guidance around procedural changes arising from government-imposed restrictions, lack of communication about the future of the organisation, and poor support for staff wellbeing. Previous research shows that operational and wellbeing support from managers represent a crucial resilience resource to cope with the uncertainty and disruption associated with a major disaster, and pose a significant risk factor for employees when lacking (Malinen et al., 2019; Walker et al., 2020). In the aftermath of a disaster, it is common for managers to experience work intensification, limiting their availability and capacity to offer support or engage in regular communications with staff (Hochwarter et al., 2008). Growing and competing demands significantly restrict the managers' ability to provide resilience-promoting resources associated with upward trajectories, namely ongoing feedback, role clarity, and recognition. This was flagged by interviewees in the Food Distribution, Healthcare, and Services sectors. Most of the participants in the Food Distribution sector noted that managers seldom showed appreciation for the additional work required of these essential workers, expected them to work longer hours and enjoy fewer rest days, and often failed to provide clear and updated information about Health and Safety guidelines through the changing alert levels. In the Healthcare and Services sectors, the respondents stated that infrequent and ambiguous communications from managers around changing roles and procedure, lack of leadership by example (e.g., expecting staff to work overtime without doing so themselves), insufficient acknowledgement of pressures, and poor support for wellbeing, significantly contributed to their stress levels and difficulty coping with role demands during the lockdown and transition back to customer-facing work.

Feeling Unsafe at Work. Over half of the essential workers operating during lockdown (i.e. Food Distribution and Healthcare), and a substantial proportion of workers returning to customer-facing jobs in the transition to a restricted alert level (i.e. Retail/Hospitality and Education) reported feeling

unsafe at work. Over 50 per cent of the healthcare workers surveyed stated that they did not have sufficient, or adequate, personal protective equipment (PPE). This sentiment is in line with accounts from healthcare workers featured in the press indicating that standard PPE, designed for a large male body, caused significant physical discomfort when used for extended time periods (e.g., bruising) and interfered with their ability to safely care for patients (e.g., limited visual field, difficulty breathing, handling equipment) (The Guardian, April 2020b). Loibner, Hagauer, Schwantzer, Berghold, and Zatloukal (2019) studied the ergonomics of PPE suits among healthcare workers exposed to infectious diseases and showed that while the suits did not impair performance, they reduced dexterity, visibility, and caused fatigue over time. These findings are verified by recent evidence from healthcare providers during the COVID-19 outbreak. PPE hinder visibility, communication, and are experienced as providing inadequate protection and causing fatigue (e.g., Prakash et al., 2020; Yáñez Benítez et al., 2020).

Interviewees in the Education sector shared their concern about their capacity to keep themselves and the children safe and socially distanced, and Retail/Hospitality workers were unsure that customers would comply with the contact and social distance guidelines imposed. Worrying about loss of life or physical integrity for an extended period can result in chronic stress, which significantly hinders the capacity to perform regular job duties. Terror management theory further explains the heightened feelings across occupational groups. Although humans are equipped with an anxiety buffering system that enables them to keep mortality thoughts at bay, acute or chronic stress events may weaken this system, and render anxiety and fear overwhelming enough to steer survival-to-decline trajectories (e.g., burnout) (Trifiletti, Pedrazza, Berlanda, & Pyszczynski, 2017). Past research examining employee experiences of earthquakes, namely their concerns about returning to office buildings and undergoing aftershocks, has highlighted the connections between sustained fear for one's life, physical and psychological health complaints, and delayed recovery or declining resilience trajectories (Malinen et al., 2019).

Technology. Over a third of the interviewees reported technology reliance as a main source of stress during lockdown, especially in the Services, Healthcare, and Education sectors. The technology-related stress was primarily ascribed to low system reliability (i.e. network failure), poor task-technology fit (i.e. technology deemed incompatible with job requirements), and the need to quickly learn and incorporate new software and technology-mediated communication with routine work. While these concerns are comprehensively covered in the technostress and virtual teams' literatures (e.g., Charalampous et al., 2019; Tarafdar, Cooper, & Stich, 2017), the stress and performance effects of a hasty transition from face-to-face to technology-

mediated work, particularly in occupations and sectors that primarily rely on co-located work, are scarcely investigated. Hence, the extant technostress literature may only hint at the true magnitude of the stress experienced by workers during the pandemic.

For instance, the stress caused by low network reliability is a pervasive issue among individuals who rely on technology for work (Braukmann, Schmitt, Ďuranová, & Ohly, 2018), and was highlighted in the interviews from participants in the Healthcare, Education, and Services sectors. However, participants in the Healthcare and Education sectors also discussed that being remote from young students or patients posed a significant source of stress, one not typically discussed in the technostress literature applied to knowledge-intensive work and organisations. In addition, Services and Education sector workers voiced their concern about the pressure and increased fatigue arising from the need to adapt to new technologies, often with minimal guidance and support (Brivio et al., 2018). Lastly, technology-mediated team and client communications contributed to a sense of alienation and further distance from individuals in the organisational network that were in close and frequent contact prior to lockdown. Accounts and scholarly explanations of this sense of psychological distance, isolation, and decreased authenticity of workplace communications are well researched, have surfaced in recent works on the global pandemic (e.g., Brodsky, 2020; Caligiuri et al., 2020; Raghuram, Hill, Gibbs, & Maruping, 2019), and represent experiences that undermine individual resilience through depleted social support.

Job Insecurity. About a quarter of all interviewees revealed concerns about job loss as a main source of stress. This concern was prevalent among participants in the Services sector (about 40% within this group) and to a lesser extent among Healthcare and Retail/Hospitality workers. Job insecurity describes feelings of uncertainty about their tenure in the organisation or the continuity of a current job role (Li et al., 2018). The prolonged uncertainty and ongoing economic and labour market changes caused by the global pandemic may raise levels of job insecurity over time and on a global scale. The significant detrimental effect of ongoing job insecurity on workers' health and wellbeing (Richter & Näswall, 2018) underscores the need for organisational leaders to attend to this psychosocial risk.

Teamwork. Nearly half of all Services and Healthcare sector interviewees discussed team-related issues as significant sources of stress. For workers in the Services sector, these issues were framed as procedural inefficiencies and poor team coordination, often linked to lack of leadership capability to drive teamwork during a crisis and to increased reliance on technology

to communicate as a team. Healthcare participants shared similar concerns around poor team leadership and resultant lack of coordination among team members. These participants also remarked that procedural errors and inefficiencies often resulted from conflict or strained peer interactions among team members, and that overwork and competing role demands described above were at the root of this problem.

The team resilience research suggests that the ability to constructively express a full range of emotions in response to adversity contributes to the development of trust, improved interaction norms, and ultimately to individual and team resilience (Degbey & Einola, 2019; Stephens, Heaphy, Carmeli, Spreitzer, & Dutton, 2013). In the pandemic context, reduced or non-existent opportunities to interact face-to-face significantly limit team members' opportunities to signal emotions and to interpret emotional signals from others, which may explain the reported misunderstandings and conflict, and could impede timely identification of declining trajectories among team members. Moreover, lack of managerial experience and resources to coordinate remote teamwork restricts the capacity to leverage important individual and collective capabilities linked to positive resilience trajectories, namely teamwork quality, learning culture, and innovation (Kuntz et al., 2017; Meneghel, Martínez, & Salanova, 2016; Stephens et al., 2013).

Customer/Patient Incivility. A quarter of the interviewees, mainly essential workers, reported negative interactions with their customers or patients as sources of psychological distress. Uncivil encounters, including being yelled at, insulted, or having one's requests and instructions ignored, deplete cognitive and emotional resources (Liu et al., 2018). Like other major disasters, the pandemic has had an indelible impact on the community, triggering anxiety about the future, and worry regarding the ability to secure basic goods and services, resulting in defiant or aggressive social behaviours. Despite the local government's clear and consistent messaging around the availability of food, infrastructure, healthcare and other basic provisions, segments of the community continue to harbour fear of supply shortages across services as the pandemic unfolds, reflected on demanding behaviour and anger when requests are not promptly met. These dynamics, and the overall context of prolonged uncertainty and ongoing threat of supply shortages, highlight the need for organisations to support and protect their customer-facing staff in the aftermath of a major crisis. This may include having a stronger managerial presence during peak and critical periods, holding formal debriefing sessions following critical incidents, and relying on job redesign and clear rules for clients to safeguard the wellbeing of frontline staff and sustain resilience.

Work–Life Conflict. Almost half of the respondents in the Services sector, notably those working from home through the lockdown period, recounted significant tensions between work and home demands, and how that ongoing tension had prompted stress. Work–life conflict signals a bidirectional tension involving work-to-home conflict (i.e. work interfering with personal life) and home-to-work conflict (i.e. personal life interfering with work) (Delanoëje, & Verbruggen, 2019). These tensions manifest in unique ways across individuals and in different occupational groups in the pandemic context. While social support at home proved vital to maintaining resilience and buffering against the negative effect of earthquake-related stress in other domains of life, including work (Malinen et al., 2019), the current pandemic forced essential workers to place a disproportionately larger investment of time and energy at work than at home, as a means to ensure financial stability through employment. As a result, essential workers saw their ability to draw on social support from family and friends vastly reduced. Furthermore, the shift from co-located to home-based work was compulsory, and in many cases meant a considerable change in circumstances for employees not accustomed to telework, including significant adjustments for these employees and their families (Caligiuri et al., 2020). Consequently, sources of home-to-work conflict specific to a disease outbreak crisis, as discussed by the interviewees, include the challenges of sharing a workspace with a partner also working from home, and having to attend to the needs of dependents while attempting to perform role duties (e.g., childcare, home-schooling).

The workplace stressors experienced across the occupational groups surveyed, along with the unique circumstances imposed by the lockdown and ongoing pandemic effects across these groups, suggest two important conclusions in line with other findings from disaster research (e.g., Bader et al., 2019; Biggs et al., 2014). First, the nature and level of exposure to an acute stressor, such as a natural disaster, result in distinctive workplace appraisals of stress and stress outcomes. In addition, a pandemic presents different psychosocial risk profiles across occupational groups and sectors. For instance, along with the typical job demands that exemplify customer-facing jobs (e.g., emotional labour), essential workers' psychosocial functioning is undermined by the lingering fear of contagion at work. For other occupational groups, the requirement to work from home for extended periods poses further psychosocial risks such as technostress, isolation, and impaired teamwork quality. Second, disasters seem to differ with respect to the type and magnitude of impact on work and non-work domains. For example, the sources of home-to-work tensions vary depending on whether workers have to balance home and job demands while working from home due to a global disease outbreak, or to leave work regularly to deal with the aftermath of property damage

caused by earthquakes or floods. In the latter scenario, leaving work to attend to personal matters may limit employees' opportunities to draw on organisational resources and support, exacerbating perceived job demands (Biggs et al., 2014). Conversely, working from home and being on lockdown restricts access to social support, a vital resilience-promoting factor.

Support and Resources during Lockdown and Transition to Restricted Alert Level

Interviewees across the sectors surveyed identified four main sources of support from their organisation that helped them cope with pandemic-related job stressors and ensured wellbeing during the "lockdown" and "restrict" levels: managerial support (operations and wellbeing), peer support, the availability of PPE, and flexibility and autonomy.

Managerial Support (Operations and Wellbeing). Almost 60 per cent of the interviewees across all sectors surveyed remarked on the importance of managerial support for wellbeing and role stressors, with 30 per cent explicitly stating clarity around role requirements, job procedures, and performance expectations as stress management factors. The importance of formal and informal managerial support echoes previous research on resilience-promoting factors in crisis contexts, and recent evidence from the Healthcare sector during the COVID-19 pandemic (e.g., Badu et al., 2020; Heath et al., 2020). The supportive management practices included weekly team meetings, one-on-one check-ins, and the provision of online resilience and wellbeing resources. Participants agreed that regular check-ins from their managers, either face-to-face or online, made a substantial difference to their ability to cope with workload and uncertainty. Managers relied on these check-in meetings to enquire about the wellbeing of their employees, but also to provide frequent and timely updates about the procedural changes that occurred as organisations and sectors aligned their approaches with the government's pandemic response strategy. Several interviewees commented on the meaning they ascribed to managers' displays of support and their ability to ensure the continuity of work processes and services through the pandemic. Regular communications and check-ins reduced ambiguity for staff, generated a sense of cohesion and collective effort across organisational levels, and instilled confidence in leadership. Past research on post-disaster resilience indicates that feeling supported by one's manager and organisation, enjoying role clarity, and having access to organisation-sanctioned tools to develop coping strategies represent resilience-promoting factors associated with recovery trajectories (Malinen et al., 2019; Walker et al., 2020).

Peer Support. About half of the interviewees remarked on peer support as a crucial job resource to cope with pandemic stressors. Peer support features prominently in the literature as a resilience-promoting factor and is routinely linked to recovery and even thriving trajectories through network leveraging for innovation and wellbeing development (e.g., Brooks et al., 2019; Kuntz et al., 2017). Respondents working remotely (e.g., Services and Education sectors) drew a sense of belonging and camaraderie during lockdown from online social activities such as virtual Friday afternoon drinks and quiz night, organised either by their managers, or informally within the team. Interviewees from the Healthcare sector depended on peer and professional networks for both social and role-related support. These participants reflected on the value of peer exchanges to debrief critical incidents and share their innovations in practices that improved patient care or circumvented limitations imposed by the unprecedented context (Badu et al., 2020). Interestingly, while participants from the Healthcare and Services sectors appreciated and valued peer support, they also noted that this resource was not sufficient to offset the negative impact of some of the job stressors reported, especially lack of managerial support and role overload. This signals that although high quality relationships and social support in teams represent important resilience-promoting factors that mitigate the effect of chronic stressors and drive innovation (Degbey & Einola, 2019; Stephens et al., 2013), peer support may not be sufficient to undercut the managerial and role-related psychosocial risks that arise in a pandemic context.

PPE. Without exception, interviewees working in the Food Distribution sector identified the availability and suitability of basic PPE as a factor that significantly contributed to mitigating the stress experienced as essential workers during a pandemic. Although the provision of PPE for essential workers is a Health and Safety requirement, several respondents regarded its availability as a sign of organisational and managerial support. In a context of heightened fear and anxiety around physical safety, workplaces and managers that successfully assuage these worries are regarded positively. Employees who feel supported by their managers and the organisation and hold positive views of the workplace are better positioned to develop personal resources linked to recovery trajectories, and the motivation to galvanise collective effort toward overall organisational recovery (Bader et al., 2019; Walker et al., 2020).

Flexibility and Autonomy. Nearly half the respondents in the Services and Food Distribution sectors identified the increased flexibility and autonomy as critical resources that supported them to cope with the job stressors posed by the global pandemic. Participants in the Food Distribution

sector noted that the provision of flexibility to organise work rosters as a team significantly reduced stress by allowing them to balance personal and role needs, and improved relationships at work. Interviewees from the Services sector noted that the autonomy and flexibility to decide whether and when to work from home, how to best transition between work from home and return to the office, and the discretion to modify tasks and ways of working to suit the demands and uncertainty of the current context, were invaluable in preserving their wellbeing and increasing resilience. Though less researched in the crisis and resilience literatures compared to managerial and peer support, autonomy emerged as an essential resource that enables workers to gain a sense of control over the environment in the face of uncertainty. Coupled with flexibility, autonomy affords employees the latitude to adjust pace, schedule, and other ways of organising work to support recovery, especially in the aftermath of a disaster (Biggs et al., 2014; Malinen et al., 2019). This level of discretion to address new and emerging job demands creatively is likely to prompt innovations connected to thriving trajectories.

The participants discussed feeling safe, supported, competently led, and afforded sufficient discretion to make changes at work to cope with pandemic-related demands as essential stress management and resilience-building factors during the lockdown period. It is worth remarking that, among the workers who reported that their workplaces had implemented effective initiatives to address the psychosocial risks that matched the disaster challenges, most stated that they would like to see these measures maintained in a post-pandemic context. These measures are affordable, adaptable to virtual and non-virtual settings, and easy to implement and sustain. They include regular wellbeing checks from managers, opportunities to develop a sense of community with co-workers through virtual platforms or co-located events, resilience and wellbeing tools to utilise at one's discretion, and flexibility to make job changes as needed. Some participants expressed apprehension at the prospect of a return to business-as-usual that disregards innovations and effective approaches to employee-focused management during the pandemic. Overall, both formal and informal support, along with autonomy and flexibility, enabled participants to cope with or address pandemic-related psychosocial risks, buffering against decline trajectories, and set the course for recovery. Importantly, participant accounts suggest that organisations where supportive practices and flexibility are common practice were in a better position to respond to pandemic-related demands and uncertainty. This is consistent with insights from the resilience research, suggesting that organisations benefit from investing in preparedness factors to ensure adaptive resilience in extreme contexts (e.g., Nilakant et al., 2016). The next section advances reframing and resourcing preparedness approaches expected to facilitate recovery and thriving trajectories in the aftermath of a major disaster.

REFRAMING AND RESOURCING TO BUILD RESILIENCE

The resilience and disaster literatures underscore the psychosocial risk and support factors that uniquely shape resilience trajectories in extreme contexts and depict workplaces as complex environments that both test and contribute to resilience development and enactment. Mounting evidence, including the interview findings outlined, indicates that organisations that provide resources that match role and contextual demands effectively manage stress and steer recovery and thriving resilience trajectories in the aftermath of a major disaster (Tonkin, Malinen, Näswall, & Kuntz, 2018). The literature also suggests that the subjective experience of an acute stressor and of the resources available in the organisation determines subsequent behavioural responses, including resource utilisation, and may play a crucial role in facilitating positive resilience trajectories (Fisher et al., 2019; Lim et al., 2020). While some individuals perceive disasters that interfere with personal and work domains solely as events that introduce threats to wellbeing (e.g., technostress), others may also detect opportunities for change and growth (e.g., a chance to upskill tech competencies and increase efficiencies at work). These distinct mindsets toward an acute stressor are the upshot of cost-benefit appraisals between the additional work demands posed by the stressor and the resources available to cope with these demands, both of which fall within the purview of organisational management. Hence, organisations can manage post-disaster stress and build resilience through initiatives and communication approaches that reframe subjective perceptions of stress and stressors, and highlight resource availability, influencing the appraisal component of individual resilience. They are also in a position to provide resources that match situational demands (i.e. resourcing for disasters), which targets the positive adaptation component of resilience to support recovery and thriving.

Reframing Stress

Acute stressors tend to weaken information-processing capacity and detract from an innovative and solutions-focused mindset in favour of traditional approaches viewed as safe and within one's control (Brockner & James, 2008; Kaiser, 2020). Stress reappraisal and mindset interventions have merited attention in the literature due to their potential to improve cognitive functioning and adaptive coping. The evidence suggests that when individuals are invited to interpret their stress response as a chance to focus personal resources (i.e. stress reappraisal interventions) and to regard their stress response as a growth opportunity rather than a negative experience (i.e. stress mindset interventions), they exhibit increased cognitive flexibility and positive affect, which support adaptive responses to significant stressors (Crane, Searle, Kangas, & Nwiran, 2019; Crum, Akinola, Martin, & Fath, 2017; Crum, Jamieson,

& Akinola, 2020; Liu, Ein, et al., 2019, Liu, Reed, & Vickers, 2019). These initiatives rely on the assumption that cognitive evaluations of internal states and environmental cues as either positive or negative influence the valence of subsequent affective states, and that it is possible to redirect these cognitive appraisals toward positive views of stress (Jamieson, Crum, Goyer, Marotta, & Akinola, 2018). Stress reappraisal and mindset interventions encourage individuals to make sense of the feelings and physiological experiences that arise from exposure to a given stressor, to consider how stress experiences can aid performance and growth, and empower them to develop a stress coping and personal resources repertoire (Crane et al., 2019; Hagger et al., 2020). The sensemaking in crisis literature provides support for this mechanism and elucidates how organisations can provide a constructive lens through which workers interpret and act upon emotions and bodily stress responses, and structure discussions around the ambiguous and often threatening external cues that characterise extreme contexts (Degbey & Einola, 2019; Maitlis & Sonenshein, 2010).

Stress reappraisal interventions fit with the constraints of the current pandemic. These interventions present organisations with a cost- and time-effective way to provide psychosocial support to their employees: they rely on messages and prompts to direct attention and behaviours, in lieu of elaborate and time-consuming training sessions, are learner-led and seen as non-obtrusive, and can be delivered online (Hagger et al., 2020). Despite their promising upshots, two caveats merit consideration. First, additional research is needed to establish the validity of stress reappraisal interventions in samples exposed to the effects of acute stressors. Liu, Ein, et al. (2019) caution that while reappraisal interventions effectively mitigate subjective stress outcomes, none of the studies involved samples exposed to a severe acute stressor such as a natural disaster. Encouragingly, several of the interviewees described online stress and wellbeing tools akin to these interventions as indicators of effective managerial support, and deemed them a valuable starting point to develop personal resources at early stages of the pandemic, particularly as a way to manage the heightened anxiety caused by fear of contagion and increased reliance on technology to perform role duties. Nonetheless, the paucity of evidence to corroborate the effectiveness of these interventions in response to the protracted stress effects of a disaster invites further enquiry.

The second caveat concerns the risk of workplaces alienating employees by disavowing their vulnerability and traumatic experiences through a major disaster. The “heroic” and “honeymoon” periods in the immediate aftermath of a disaster are characterised by a surge of optimism (Brooks et al., 2019) and may offer a misleading indication of recovery trajectories (Walker et al., 2020). While the initial optimism dwindles over time due to ongoing stress exposure, some organisations disavow this downward course and implicitly

foster the suppression of negative emotions in favour of a “chin-up” stance. Past research on resilience in extreme contexts indicates that failing to monitor changes to employees’ mental health and the acute stressor’s lingering impact on working life undermines resilience and recovery (e.g., Maitlis, 2020; Walker et al., 2020). Hence, stress reappraisal interventions should incorporate co-located or virtual guided discussions that raise awareness of the shifting emotional experiences and recovery trajectories that arise from protracted disasters such as disease outbreaks (Barton & Kahn, 2018).

Reframing Stressors

Further to reframing stress and its psychophysiological expressions as resilience-building resources, while acknowledging vulnerability and anxiety as expected upshots of disaster exposure, organisations can also guide employees to shift the construal of a stressor and its impact on work and the organisation, that is, reframe the stressor. This transition is undoubtedly simpler when the stressor in question is easily framed as a positive challenge or falls almost entirely under the individual’s control (e.g., being invited to join a new and exciting project). Alas, natural disasters preclude a sense of control and personal benefit, at least at face value, rendering the negative features of the stressors disproportionately salient relative to the opportunities they might present. Stress responses naturally derive from the cognitive assessment that the pandemic-related stressors exceed personal and organisational resources, and that they are insurmountable or inevitable. Still, organisations can help employees reframe the impact of an acute stressor, and support recovery and thriving resilience trajectories, by openly discussing and managing work demands while highlighting the availability of support and resources to meet these demands. In addition, organisations can facilitate the process of balancing tensions specific to workers’ experiences of the pandemic, such as the perceived opposition between staying home, temporarily sacrificing livelihood to safeguard public and personal health, and going to work in the interest of economic health, raising physical health risks for all (Kaiser, 2020). In what follows, these stressor-reframing approaches are examined through the lens of crisis communication, a topic that has drawn growing interest in the resilience research (Dutton et al., 2006; Kim, 2020; Meneghel et al., 2016).

Crisis Communication. Olsson (2014) proposes a crisis communication typology that distinguishes between operational and strategic communication approaches aimed at safeguarding institutional reputation in the aftermath of a disaster, and operational and strategic communication approaches that target resilience development. Regarding the latter, organisations that engage in operational resilience-oriented communications work in tandem

with government agencies to provide frequent and reliable information about the crisis as it unfolds. These workplaces discuss how the crisis may affect organisational practices and resources and provide individuals with dependable information, empowering them to make sound decisions about their physical and psychological safety, and guiding coping efforts at work. Operational resilience-oriented communications emphasise shared responsibility among government agencies, workplaces, and individuals, a critical factor in the mutually enhancing resilience dynamics between organisation and employees (Kim et al., 2020; Kuntz et al., 2017).

Strategic resilience-oriented communications convey a clear direction and compelling vision for the future of the organisation, the stages of its crisis management plan, and elucidate the vital part that employees play in the recovery process through their unique capabilities and contributions, whilst also recognising the disruptive effects of the crisis on personal and social resources. The extant research and the interview accounts presented here suggest that balanced strategic and supportive communications facilitate crisis sensemaking and contribute to resilience development through enhanced efficacy beliefs around crisis management, increased sense of control, information-seeking behaviours, and proactive role behaviours (Degbey & Einola, 2019; Kim, 2020; Maitlis & Sonenshein, 2010). As a starting point, organisations can prompt employee awareness of their unique capabilities, strengths, and capacity to address situational demands, which raises levels of wellbeing and resilience following a disaster to facilitate recovery and thriving trajectories (Brunetto et al., 2019).

Reframing Work Stressors through Resilience-Oriented Communication. The resilience-oriented communication approaches described hold the promise to reframe perceptions of the pandemic stressors outlined earlier in the interviews, namely the ongoing fear of contagion at work, uncertainty about the future of the organisation, job insecurity, and technostress, and to support positive resilience trajectories. Regarding fear of contagion, organisations that provide timely and accurate information about how to work safely by maintaining physical distance, wearing appropriate PPE, and adhering to hygiene guidelines, will support employees to take control over their safety. In doing so, they allay fear of contagion and the enduring sense of threat associated with the virus, which decreases anxiety states associated with decline trajectories. Moreover, although the long-term future of businesses and markets is uncertain under the current pandemic, strategic communications can enhance resilience and foster proactive and innovative behaviours consistent with thriving trajectories by clarifying how employees contribute to the crisis recovery plan and the future of the organisation (Brooks et al., 2019; Kuntz et al., 2017).

When workers' employment status or the continuity of job roles is not under deliberation, organisations can convey a sense of job security by reiterating how these employees fit with and contribute to the strategy, and sharing transparent information about restructuring plans that may entail downsizing or other staffing changes. This assurance will enhance trust in leaders and the organisation, and mitigate the deleterious impact of job insecurity by allowing employees to manage stress and refocus their energy on positive adaptation (Richter & Näswall, 2018; Shoss, Jiang, & Probst, 2018). Having a sense of certainty about one's role and contributions through a crisis also ensures that employees feel tethered to the team and organisation. The subjective experience of belonging to an organisation at a time where social distancing amplifies the susceptibility to feelings of loneliness, along with the confidence of being guided expertly through a crisis, lay essential foundations for upward resilience trajectories.

Lastly, resilience-oriented communications can help employees reframe negative perceptions of technology-mediated work and revisit cynical views of an increasingly digital future. In the sample interviewed for this paper, employees noted concerns about technology reliance, their low sense of efficacy to adapt to new platforms and virtual etiquette, the lack of appropriateness of technology to role requirements, and a sense of social disengagement from fellow workers, clients, and other stakeholders. The technostress research provides ample indication of the stressors uniquely associated with virtual work, and of the factors associated with employee recovery, yet, it relies primarily on evidence provided by knowledge workers or organisations that have undergone technology infrastructure changes, rather than data from disaster contexts (e.g., Braukmann et al., 2018; Charalampous, et al., 2019). Hence, the immediate and long-term effects of a rapid move to virtual work required from countless workplaces due to a global pandemic remain unknown. Despite this, organisations can manage technostress by acknowledging the significant stressors underlying a swift change to technology-mediated work, and by creating a safety culture where employees receive sufficient support and latitude to learn and adapt to a virtual work environment (Brivio et al., 2018; Degbey & Einola, 2019). Additionally, workplaces can promote techno-eustress by reframing technology-mediated work as an opportunity for skill development, for increased control over the scheduling and timing of stakeholder interactions to mitigate emotional labour, and a space of greater role flexibility and autonomy (Tarafdar et al., 2017).

Resourcing to Steer Recovery and Thriving Resilience Trajectories

The stress and stressor reframing approaches recommended present a first step to develop workplace resilience through the pandemic and steer recovery

and thriving trajectories. Yet, prompting employees to re-evaluate their beliefs about stress, job stressors, and resources is necessary to guide growth-oriented appraisals, but not sufficient to ensure positive adaptation through disasters. Organisations build inherent resilience (i.e. preparedness) by continually developing personal and systems resources. However, the adaptive capability that underpins both recovery and thriving resilience trajectories requires that workplaces also manage the psychosocial risks uniquely derived from or intensified by a disaster, and provide resources consistent with the specific challenges it poses (Biggs et al., 2014).

The extant evidence suggests that resilient organisations steer a thriving trajectory because they pre-emptively build resilience capability, and subsequently engage in agile risk and resource management to ensure employees are well set to take advantage of opportunities and grow through a crisis (Lim et al., 2020). Hence, resilient organisations have preparedness factors that support recovery trajectories in the aftermath of a major disaster, and bank on this inherent resilience capability to explore avenues of innovation and flow into thriving trajectories (Nilakant et al., 2016). The literature outlines a plethora of evidence-based initiatives, practices, and systems linked to inherent resilience capability, including wellbeing and resilience interventions (Tonkin et al., 2018; Vanhove et al., 2016), strengths-based competency development (Brunetto et al., 2019; van Woerkom, Bakker, & Nishii, 2016), ongoing feedback and recognition (Heath et al., 2020), learning cultures (Malik & Garg, 2017; Walker et al., 2020), agile leadership (Badu et al., 2020; Cooke et al., 2019; Kaiser, 2020), clear and supportive communications (Brooks et al., 2019; Meneghel et al., 2016), and technology infrastructure that supports effective knowledge management and social interactions (Charalampous et al., 2019; Lim et al., 2020). When these factors are in place, managers are better able to identify the risks linked to the crisis at hand, and to develop resources that uniquely fit its demands and constraints.

In the current pandemic, recovery and thriving resilience trajectories signify organisations with the capability to implement rapid changes aimed at increasing structural and functional flexibility. Depending on their sector, some organisations might capitalise on technology to expand operations or improve work processes, while others opt to explore new markets, products, and services. Workplaces presenting low inherent resilience (i.e. low preparedness) are at some disadvantage. Nevertheless, insights from the interviews suggest that they can begin to redress these capability deficits by investing in employee-supportive measures at early stages of crisis response. In practice, organisations might identify the psychosocial risks specific to their work environment and sector, implement reframing initiatives for stress and stressors such as the ones outlined here, and concurrently provide or collaboratively develop resources to undercut the negative impact of the pandemic on resilience.

CONCLUSION

Recent decades have witnessed a surge of scholarly proposals for resilience development strategies, spanning employee-centred lifestyle changes, health promotion initiatives, and changes to organisational practices and systems to ensure employee resilience. The COVID-19 global pandemic stands as a substantial and enduring test to individual, organisational, and community resilience. The crisis has prompted calls to examine the psychosocial risk factors associated with its immediate impact and aftermath in occupational contexts, and to identify how organisations can support recovery and thriving resilience trajectories. This paper integrates the extensive corpus of crisis resilience literature with worker accounts of pandemic-related stressors and protective factors and relies on the evidence to recommend a reframing and resourcing approach to resilience development for disaster contexts.

REFERENCES

- Bader, B., Schuster, T., & Dickmann, M. (2019). Managing people in hostile environments: Lessons learned and new grounds in HR research. *The International Journal of Human Resource Management*, 30(20), 2809–2830.
- Badu, E., O'Brien, A. P., Mitchell, R., Rubin, M., James, C., McNeil, K., ... Giles, M. (2020). Workplace stress and resilience in the Australian nursing workforce: A comprehensive integrative review. *International Journal of Mental Health Nursing*, 29(1), 5–34. <https://doi.org/10.1111/inm.12662>
- Bakić, H. (2019). Resilience and disaster research: Definitions, measurement, and future directions. *Psychological Topics*, 28(3), 529–547.
- Barton, M. A., & Kahn, W. A. (2018). Group resilience: The place and meaning of relational pauses. *Organization Studies*, 40(9), 1409–1429. <https://doi.org/10.1177/0170840618782294>
- Biggs, A., Brough, P., & Barbour, J. (2014). Exposure to extraorganizational stressors: Impact on mental health and organizational perceptions for police officers. *International Journal of Stress Management*, 21(3), 255–282.
- Bonanno, G.A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *The American Psychologist*, 59(1), 20–28.
- Braukmann, J., Schmitt, A., Đuranová, L., & Ohly, S. (2018). Identifying ICT-related affective events across life domains and examining their unique relationships with employee recovery. *Journal of Business and Psychology*, 33(4), 529–544.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Brivio, E., Gaudioso, F., Vergine, I., Mirizzi, C.R., Reina, C., Stellari, A., & Galimberti, C. (2018) Preventing technostress through positive technology. *Frontiers in Psychology*, 9, 2569. <https://doi.org/10.3389/fpsyg.2018.02569>
- Brockner, J., & James, E. (2008). Toward an understanding of when executives see crisis as opportunity. *The Journal of Applied Behavioral Science*, 44(1), 94–115.

- Brodsky, A. (2020). Virtual surface acting in workplace interactions: Choosing the best technology to fit the task. *Journal of Applied Psychology*, <https://doi.org/10.1037/apl0000805>
- Brooks, S., Dunn, R., Amlôt, R., Rubin, G., & Greenberg, N. (2019). Protecting the psychological wellbeing of staff exposed to disaster or emergency at work: A qualitative study. *BMC Psychology*, *7*(1), 78.
- Brunetto, Y., Dick, T., Xerri, M., & Cully, A. (2019). Building capacity in the health-care sector: A strengths-based approach for increasing employees' well-being and organisational resilience. *Journal of Management & Organization*, *26*(3), 1–15.
- Caligiuri, P., De Cieri, H., Minbaeva, D., Verbeke, A., & Zimmermann, A. (2020). International HRM insights for navigating the COVID-19 pandemic: Implications for future research and practice. *Journal of International Business Studies*, *51*(5), 697–713.
- Carvalho, A., & Areal, N. (2016). Great places to work®: Resilience in times of crisis. *Human Resource Management*, *55*(3), 479–498.
- Charalampous, M., Grant, C., Tramontano, C., & Michailidis, E. (2019). Systematically reviewing remote e-workers' well-being at work: A multidimensional approach. *European Journal of Work and Organizational Psychology*, *28*(1), 51–73.
- Cooke, F.L., Cooper, B., Bartram, T., Wang, J., & Mei, H. (2019). Mapping the relationships between high-performance work systems, employee resilience and engagement: A study of the banking industry in China. *The International Journal of Human Resource Management*, *30*(8), 1239–1260.
- Crane, M. F., Searle, B. J., Kangas, M., & Nwiran, Y. (2019). How resilience is strengthened by exposure to stressors: The systematic self-reflection model of resilience strengthening. *Anxiety, Stress, and Coping*, *32*(1), 1–17.
- Crum, A., Akinola, M., Martin, A., & Fath, S. (2017). The role of stress mindset in shaping cognitive, emotional, and physiological responses to challenging and threatening stress. *Anxiety, Stress, and Coping*, *30*(4), 379–395.
- Crum, A., Jamieson, J., & Akinola, M. (2020). Optimizing stress: An integrated intervention for regulating stress responses. *Emotion*, *20*(1), 120–125.
- Degbey, W. Y., & Einola, K. (2019). Resilience in virtual teams: Developing the capacity to bounce back. *Applied Psychology*, *69*(4), 1301–1337.
- Delanoëje, J., & Verbruggen, M. (2019). The use of work-home practices and work-home conflict: Examining the role of volition and perceived pressure in a multi-method study. *Frontiers in Psychology*, *10*, 1–18.
- DeSimone, J., Harms, P., Vanhove, A., & Herian, M. (2017). Development and validation of the Five-by-Five resilience scale. *Assessment*, *24*(6), 778–797.
- Dutton, J., Worline, M., Frost, P., & Lilius, J. (2006). Explaining compassion organizing. *Administrative Science Quarterly*, *51*(1), 59–96.
- Fisher, D. M., Ragsdale, J. M., & Fisher, E. C. (2019). The importance of definitional and temporal issues in the study of resilience. *Applied Psychology*, *68*(4), 583–620.
- Fletcher, D., & Sarkar, M. (2013). Psychological resilience: A review and critique of definitions, concepts, and theory. *European Psychologist*, *18*(1), 12–23.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, *56*(3), 218–226.

- Gan, Y., Chen, Y., Han, X., Yu, N. X., & Wang, L. (2019). Neuropeptide Y gene \times environment interaction predicts resilience and positive future focus. *Applied Psychology: Health and Wellbeing*, 11(3), 438–458.
- The Guardian (October, 2020a) *New Zealand's Covid-19 response the best in the world, say global business leaders*. London, UK: Guardian News & Media Limited. Retrieved from <https://www.theguardian.com/world/2020/oct/08/new-zealands-covid-19-response-the-best-in-the-world-say-global-business-leaders>
- The Guardian (2020b). *Sexism on the Covid-19 frontline: 'PPE is made for a 6ft 3in rugby player'*. London, UK: Guardian News & Media Limited. Retrieved from <https://www.theguardian.com/world/2020/apr/24/sexism-on-the-covid-19-front-line-ppe-is-made-for-a-6ft-3in-rugby-player>
- Hagger, M. S., Keech, J. J., & Hamilton, K. (2020). Managing stress during the coronavirus disease 2019 pandemic and beyond: Reappraisal and mindset approaches. *Stress and Health*, 36(3), 396–401. <https://doi.org/10.1002/smi.2969>
- Hartmann, S., Weiss, M., Newman, A., & Hoegl, M. (2020). Resilience in the workplace: A multilevel review and synthesis. *Applied Psychology*, 69(3), 913–959.
- Hartwig, A., Clarke, S., Johnson, S., & Willis, S. (2020). Workplace team resilience: A systematic review and conceptual development. *Organizational Psychology Review*, 10(3–4), 169–200.
- Heath, C., Sommerfield, A., & von Ungern-Sternberg, B. (2020). Resilience strategies to manage psychological distress among healthcare workers during the COVID-19 pandemic: A narrative review. *Anaesthesia*, 75(10), 1364–1371.
- Helton, W., & Head, J. (2012). Earthquakes on the mind: Implications of disasters for human performance. *Human Factors: The Journal of Human Factors and Ergonomics Society*, 54(2), 189–194.
- Hochwarter, W., Laird, M., & Brouer, R. (2008). Board up the windows: The interactive effects of hurricane-induced job stress and perceived resources on work outcomes. *Journal of Management*, 34(2), 263–289.
- Jamieson, J., Crum, A., Goyer, J., Marotta, M., & Akinola, M. (2018). Optimizing stress responses with appraisal and mindset interventions: An integrated model. *Anxiety, Stress & Coping*, 31, 245–261.
- Kaiser, R. (2020). Leading in an unprecedented global crisis: The heightened importance of versatility. *Consulting Psychology Journal: Practice and Research*, 72(3), 135–154.
- Kim, Y. (2020). Organizational resilience and employee work-role performance after a crisis situation: Exploring the effects of organizational resilience on internal crisis communication. *Journal of Public Relations Research*, 32(1–2), 1–29.
- Kuntz, J. C., Malinen, S., & Näswall, K. (2017). Employee resilience: Directions for resilience development. *Consulting Psychology Journal*, 69(3), 223–242.
- Li, Z., Li, Z., Long, C., Long, C., Er-Yue, T., & Er-Yue, T. (2018). When does job insecurity lead to feedback-seeking behavior? The counterintuitive moderating role of perceived organizational support. *Current Psychology*, 37(4), 850–861.
- Lim, D., Hur, H., Ho, Y., Yoo, S., & Yoon, S. (2020). Workforce resilience: Integrative review for human resource development. *Performance Improvement Quarterly*, 33(1), 77–101.

- Liu, J. J. W., Ein, N., Gervasio, J., & Vickers, K. (2019). The efficacy of stress reappraisal interventions on stress responsivity: A meta-analysis and systematic review of existing evidence. *PLoS One*, *14*(2), e0212854.
- Liu, J. J. W., Reed, M., & Vickers, K. (2019). Reframing the individual stress response: Balancing our knowledge of stress to improve responsivity to stressors. *Stress and Health*, *35*(5), 607–616.
- Loibner, M., Hagauer, S., Schwantzer, G., Berghold, A., & Zatloukal, K. (2019). Limiting factors for wearing personal protective equipment (PPE) in a health care environment evaluated in a randomised study. *PLoS One*, *14*(1), e0210775–e0210775. <https://doi.org/10.1371/journal.pone.0210775>
- Lyons, S. T., Schweitzer, L., & Ng, E. S. W. (2015). Resilience in the modern career. *Career Development International*, *20*(4), 363–383.
- Maitlis, S. (2020). Posttraumatic growth at work. *Annual Review of Organizational Psychology and Organizational Behavior*, *7*(1), 395–419.
- Maitlis, S., & Sonenshein, S. (2010). Sensemaking in crisis and change: Inspiration and insights from Weick (1988). *Journal of Management Studies*, *47*(3), 551–580.
- Malik, P., & Garg, P. (2017). The relationship between learning culture, inquiry and dialogue, knowledge sharing structure and affective commitment to change. *Journal of Organizational Change Management*, *30*(4), 610–631.
- Malinen, S., Hatton, T., Näswall, K., & Kuntz, J. C. (2019). Strategies to enhance employee well-being and organisational performance in a postcrisis environment: A case study. *Journal of Contingencies and Crisis Management*, *27*(1), 79–86.
- Mandavia, A. D., & Bonanno, G. A. (2019). When natural disaster follows economic downturn: The incremental impact of multiple stressor events on trajectories of depression and posttraumatic stress disorder. *Disaster Medicine and Public Health Preparedness*, *13*(2), 1–10.
- Meneghel, I., Martínez, I., & Salanova, M. (2016). Job-related antecedents of team resilience and improved team performance. *Personnel Review*, *45*(3), 505–522.
- Nilakant, V., Walker, B., University of Canterbury, & New Zealand. Ministry of Business, Innovation & Employment (2016). *Becoming agile: A guide to building adaptive resilience*. Christchurch, NZ: Bernard Walker and Venkataraman Nilakant.
- Olsson, E.-K. (2014). Crisis communication in public organisations: Dimensions of crisis communication revisited. *Journal of Contingencies and Crisis Management*, *22*(2), 113–125.
- Prakash, G., Shetty, P., Thiagarajan, S., Gulia, A., Pandrowala, S., Singh, L., Thorat, V., Patil, V., Divatia, J.V., Puri, A., & Pramesh, C.S. (2020). Compliance and perception about personal protective equipment among health care workers involved in the surgery of COVID-19 negative cancer patients during the pandemic. *Journal of Surgical Oncology*, *122*(6), 1013–1019. <https://doi.org/10.1002/jso.26151>
- Raghuram, S., Hill, N. S., Gibbs, J. L., & Maruping, L. M. (2019). Virtual work: Bridging research clusters. *Academy of Management Annals*, *13*(1), 308–341.
- Richter, A., & Näswall, K. (2018). Job insecurity and trust: Uncovering a mechanism linking job insecurity to well-being. *Work and Stress*, *33*(1), 22–40.
- Shakespeare-Finch, J., Bowen-Salter, H., Cashin, M., Badawi, A., Wells, R., Rosenbaum, S., & Steel, Z. (2020). COVID-19: An Australian perspective. *Journal of Loss & Trauma*, *25*(8), 662–672.

- Shaw, J., McLean, K., Taylor, B., & Swartout, K. (2016). Beyond resilience: Why we need to look at systems too. *Psychology of Violence, 6*(1), 34–41.
- Shoss, M., Jiang, L., & Probst, T. (2018). Bending without breaking: A two-study examination of employee resilience in the face of job insecurity. *Journal of Occupational Health Psychology, 23*(1), 112–126.
- Southwick, S. M., Bonanno, G. A., Masten, A. S., Panter-Brick, C., & Yehuda, R. (2014). Resilience definitions, theory, and challenges: Interdisciplinary perspectives. *European Journal of Psychotraumatology, 5*(1), 25338–25414.
- Stephens, J. P., Heaphy, E. D., Carmeli, A., Spreitzer, G. M., & Dutton, J. E. (2013). Relationship quality and virtuousness: Emotional carrying capacity as a source of individual and team resilience. *Journal of Applied Behavioral Science, 49*(1), 13–41.
- Sutcliffe, K., & Vogus, T. (2003). Organizing for resilience. In K. Cameron, K. J. Dutton, & R. Quinn (Eds.), *Positive organizational scholarship* (pp. 94–121). San Francisco, CA: Berrett-Koehler.
- Tarafdar, M., Cooper, C. L., & Stich, J. (2017). The technostress trifecta—Techno eustress, techno distress and design: Theoretical directions and an agenda for research. *Information Systems Journal, 29*(1), 6–42.
- Tedeschi, R. G., Calhoun, L. G., Shakespeare-Finch, J., & Taku, K. (2018). *Posttraumatic growth: Theory, research, and applications*. Boca Raton, FL: Routledge, an imprint of Taylor and Francis.
- Tonkin, K., Malinen, S., Näswall, K., & Kuntz, J. C. (2018). Building employee resilience through wellbeing in organizations. *Human Resource Development Quarterly, 29*(2), 107–124.
- Trifiletti, E., Pedrazza, M., Berlanda, S., & Pyszczyński, T. (2017). Burnout disrupts anxiety buffer functioning among nurses: A three-way interaction model. *Frontiers in Psychology, 8*, 1362.
- Unite Against COVID-19 (2020). Retrieved from <https://covid19.govt.nz/alert-system/alert-system-overview/>
- van Woerkom, M., Bakker, A. B., & Nishii, L. H. (2016). Accumulative job demands and support for strength use: Fine-tuning the job demands-resources model using conservation of resources theory. *Journal of Applied Psychology, 101*(1), 141–150.
- Vanhove, A., Herian, M., Perez, A. L., Harms, P., & Lester, P. (2016). Can resilience be developed at work? A meta-analytic review of resilience-building programme effectiveness. *Journal of Occupational & Organizational Psychology, 89*(2), 278–307.
- Walker, B., Malinen, S., Näswall, K., Nilakant, V., & Kuntz, J. (2020). Organizational resilience in action: A study of a large-scale extended disaster setting. In E.H. Powley, B.B. Caza, & A. Caza (Eds.) *Research Handbook on Organizational Resilience* (pp. 320–336). Cheltenham, UK: Edward Elgar Publishing.
- World Health Organization (2020). Retrieved from <https://covid19.who.int/>
- Yáñez Benítez, C., Güemes, A., Aranda, J., Ribeiro, M., Ottolino, P., Di Saverio, S., Alexandrino, H., Ponchietti, L., Blas, J.L., Ramos, J.P., Rangelova, E., Muñoz, M., & Yáñez, C. (2020). Impact of personal protective equipment on surgical performance during the COVID-19 pandemic. *World Journal of Surgery, 44*(9), 2842–2847.
- Yao, Z., & Hsieh, S. (2019). Neurocognitive mechanism of human resilience: A conceptual framework and empirical review. *International Journal of Environmental Research and Public Health, 16*(24), 5123.