ORIGINAL PAPER

How Can Organizational Leaders Help? Examining the Effectiveness of Leaders' Support During a Crisis

Cheryl E. Gray[1] · Paul E. Spector[2] · Janelle E. Wells[3] · Shayla R. Bianchi[1] · Claudia Ocana-Dominguez[1] · Casey Stringer[1] · Javier Sarmiento[1] · Tiffany Butler[4]

Abstract
Organizational leaders can make a large, positive impact on their employees during crises. However, existing research demonstrates that social support is not always effective in helping employees cope with stress, and existing research has not fully identified features of support attempts that determine their effectiveness. Using mixed methods, the authors investigate the efficacy of organizational leaders' support efforts during a crisis. In the first study, 571 employees (196 university administrative staff, 192 licensed nurses, and 183 licensed engineers) described actions their leaders engaged in to support them during a global pandemic. Nine themes differentiated helpful from unhelpful leadership support: autonomy, changes, communication, personal resources, safety, timing, tone, work equipment, and workload. Study 2 used a quantitative methodology (162 licensed nurses and 239 licensed engineers) to demonstrate that leadership actions employees deemed as helpful in Study 1 were associated with less employee burnout and fewer physical symptoms. Drawing from emerging social support literature and the stressor-strain model, the findings inform optimal leadership support practices during crises.

Keywords Leadership support · Social support · Crisis response · Leadership · Support · Crisis · Stress · Stressors · Strains

When a crisis strikes and employees are struggling, organizational leaders are called to provide rapid support, often with little to no warning or guidance. While many organizational leaders are familiar with basic principles of crisis management, most existing knowledge focuses on the role of leaders to aid in the survival of the organization rather than the role of leaders to support employees' well-being during tumultuous times (Bundy et al., 2017). Drawing from

emerging social support literature (e.g., Bavik et al., 2020; Gray et al., 2020; Mathieu et al., 2019) and the stressor-strain model (Jex & Beehr, 1991), this research investigates employees' perceptions of their leaders' support during a crisis and provides a taxonomy of features that determine support effectiveness.

Organizational leaders are uniquely positioned to support their employees during particularly stressful circumstances.

✉ Cheryl E. Gray
  cgray14@usf.edu

  Paul E. Spector
  pspector@usf.edu

  Janelle E. Wells
  janellew@usf.edu

  Shayla R. Bianchi
  bianchis@usf.edu

  Claudia Ocana-Dominguez
  claudiaocana@usf.edu

  Casey Stringer
  cstringer@usf.edu

  Javier Sarmiento
  sarmientoj@usf.edu

  Tiffany Butler
  tiffany53@usf.edu

[1] Department of Psychology, University of South Florida, 4202 E Fowler Ave, Tampa, FL 33620, USA

[2] School of Information Systems & Management, Univeristy of South Florida, Tampa, FL, USA

[3] Vinik Sport & Entertainment Management, University of South Florida, Tampa, FL, USA

[4] College of Public Health, Univeristy of South Florida, Tampa, FL, USA

Decades of research suggest that employees who report more supervisor support often experience higher job satisfaction, less emotional exhaustion, and fewer physical symptoms (e.g., headache, fatigue; Mathieu et al., 2019). Importantly, supervisor support can also serve a protective role (i.e., a buffer) against negative effects of workplace stressors (Cohen & Wills, 1985; Daniels & Guppy, 1994; Mathieu et al., 2019; Viswesvaran et al., 1999). When stress levels are high, as during a crisis, individuals are especially sensitive and responsive to the provision of social support (Bavik et al., 2020).

While crises call for organizational leaders to take supportive actions, research warns that social support is not universally helpful. A recent meta-analysis found that reverse-buffering effects of social support were just as common as protective effects (Mathieu et al., 2019). An interdisciplinary qualitative review of social support also highlighted the prevalence of findings that social support can serve as a "negativity exacerbator" (Bavik et al., 2020, p. 18). In response to such findings, Gray et al. (2020) introduced the construct of unhelpful workplace social support, defined as "any action taken by a supervisor and/or colleague that the recipient believes was intended to benefit [them] but is perceived as unhelpful or harmful," (p. 359). For example, a micromanager may get too involved in an employees' work when trying to be helpful. Organizational leaders may be particularly prone to providing unhelpful support during crises that pose novel challenges for which they are ill prepared to respond.

Given findings of both helpful and unhelpful support during periods of "normalcy," this research asks an important unanswered question: What aspects of organizational leaders' support determine its helpfulness during a crisis? To address this question, Study 1 uses an exploratory qualitative methodology to purposefully differentiate helpful from unhelpful leadership support employees received during a global pandemic. While previous research has investigated helpful and unhelpful support separately (Beehr et al., 2010; Deelstra et al., 2003; Gray et al., 2020), this is the first known research to provide direct comparisons between helpful and unhelpful leadership support within the same samples. In doing so, we built a taxonomy of support features that determine helpfulness during a crisis. Using the stressor-strain model (Ganster & Rosen, 2013; Jex & Beehr, 1991) as a theoretical framework from which to draw hypotheses, Study 2 uses a quantitative methodology to confirm that helpful supportive behaviors identified in Study 1 are associated with better employee well-being (i.e., less burnout and physical symptoms). Together, the studies provide meaningful insights on how organizational leaders can effectively support their employees during crises.

Study 1

Social support has been defined as "an exchange of resources between two individuals perceived by the provider or the recipient to be intended to enhance the wellbeing of the recipient," (Shumaker & Brownell, 1984, p. 11). Notably, the definition of social support does not specify whether the support helps the recipient, just that it is provided (Gray et al., 2020). Traditionally, social support from leaders was considered a universally beneficial resource associated with enhanced employee well-being (Cohen & Wills, 1985; House, 1981; Viswesvaran et al., 1999). However, some forms of well-intended support can have unintended negative consequences (Bavik et al., 2020; Beehr et al., 2010; Deelstra et al., 2003; Gray et al., 2020). Deelstra et al. (2003) conducted an experimental study which found that receiving unsolicited support from a coworker (a confederate in the study) was generally associated with lower competence-based self-esteem, more negative affect, and faster heart rate. Beehr et al. (2010) found that three potentially supportive interactions were associated with worse psychological and physical well-being among employees: interactions that cause the support recipient to dwell on negative experiences, help that leads to feelings of incompetence, and unwanted help. Recently, four additional forms of coworker support were linked with negative physical and psychological outcomes: conflicting support (multiple providers offer differing advice or instructions), partial support (incomplete, imprecise, or unclear support), undependable support (unreliable, delayed, or low-quality assistance), and uncomforting support (invalidating emotional support; Gray et al., 2020).

In a recent interdisciplinary qualitative review, Bavik et al. (2020) hypothesized that helpful and unhelpful support can be distinguished by an (in)congruence between key variables. An incongruence may be present between social support and stressors if there is misalignment concerning valence (e.g., providing support for positive stressors), domain (e.g., being the source of both the stressor and support), content specificity (e.g., failing to tailor an alcohol abuse program to alcohol-specific support), and/or temporal characteristics (e.g., providing unstable levels of support across time; Bavik et al., 2020). The researchers also identified the potential for (in)congruence between social support and individual characteristics of the recipient such as genetics (e.g., low oxytocin may promote negative interpretations of support), demographics (e.g., socially disadvantaged groups may have a higher need for support), and personality (e.g., anxious and ambivalent attachment styles may foster a higher need for support). Finally, Bavik and colleagues (2020) posited that there may be joint effects due to an (in)congruence among social support, stressors, and individual characteristics.

While these factors considerably help to explain the (in)efficacy of workplace support, another factor has been underexamined: the nature of the support provided (Gray et al., 2020). If researchers can identify characteristics of the support itself that influence its efficacy, the understanding of social support will be considerably enhanced, and practitioners will have more actionable insights for improving the efficacy of social support. The potential to distinguish helpful and unhelpful leadership actions is reflected in research conducted during crises (Sun et al., 2016; Van Heugten, 2016). In a study following the Christchurch earthquakes in 2010, employees valued clear communication from managers regarding their risk and safety as well as the organization's future plans (Van Heugten, 2016). Employees also appreciated being offered leave options as well as financial and material assistance. They reported that being prevented from discussing the event at work only added to their distress, and formal counseling was not helpful (Van Heugten, 2016). A rigorous investigation of what differentiates helpful and unhelpful leadership actions may help improve leadership practices during times when leadership support is particularly important. This research aims to provide a taxonomy of factors that differentiate helpful and unhelpful leadership supportive actions during a crisis.

Research Question: What factors inherent to the support provided help to differentiate helpful and unhelpful leadership support during a crisis?

Method

In an open-ended online survey, employees described helpful and unhelpful actions their organizational leader(s) took to support them during the COVID-19 pandemic. During unprecedented circumstances, qualitative research can be particularly effective for gaining in-depth insights that fall outside the confines of previous research and theory (Gephart, 2004). Similar qualitative methods were effective for developing taxonomies on a variety of topics related to mentorship and organizational support (Eby et al., 2000; Gray et al., 2020).

Participants and Procedures

Participants were recruited via email using publicly available lists of Florida university staff, Florida licensed nurses, and Florida licensed engineers amid the COVID-19 pandemic. These samples were selected because we envisioned that they would face disparate circumstances during the crisis. Nurses faced exceptionally difficult circumstances while taking care of patients amid a pandemic (Maben & Bridges, 2020). Those on the front lines of in-person healthcare jeopardized their own safety to care for others, often with

limited access to personal protective equipment and oversaturated facilities (Maben & Bridges, 2020). In contrast, all university staff except Critical Function Personnel transitioned to fulfilling their administrative work obligations remotely. Engineers, whose jobs involve problem-solving the development and operations of products and systems, had to navigate supply, demand, personnel, and process challenges (Costabile, 2020). By investigating these occupations, we strived to derive insights to aid employees in a wide variety of circumstances during crises.

All data were collected between May 8, 2020 and May 27, 2020, amid the global COVID-19 pandemic. During this time, between 371 and 1202 new COVID-19 cases were confirmed among Floridians per day. By May 27, a total of 52,549 COVID-19 cases were confirmed in the state of Florida (Johns Hopkins University of Medicine, 2020). Initially, emails were sent to 1834 university administrative staff, 6849 licensed nurses, and 9854 licensed engineers. Those willing to participate completed the online survey, resulting in samples of 196 university administrative staff, 192 licensed nurses, and 183 licensed engineers. Participants received a $10 gift card to a retailer of their choosing for their participation. The high nonresponse rate may be attributed to incorrect email addresses (approximately 280 undeliverable emails), unopened emails, career changes, and concerns about cyber security. Many employees sent email replies about career changes, such as retirement, or asked for further information to assure them the research is legitimate. The survey distribution platform, Qualtrics, shows that 65% of university administrative staff, 60% of licensed nurses, and 59% of licensed engineers who started the survey completed it. Participants' demographics are provided in Table 1.

Measures

Helpful Leadership Support Participants were asked to "Describe something an organizational leader (e.g., direct supervisor, top management) has done that has helped you during the COVID-19 outbreak." Then they were asked, "Why were their actions helpful?" Finally, they were asked to "Describe any positive outcome(s) that occurred as a result of their help." Responses to these questions were combined for analysis.

Unhelpful Leadership Support Mirroring the questions about helpful leadership support, participants were asked to "Describe something an organizational leader (e.g., direct supervisor, top management) has done that was well-intended, but unhelpful during the COVID-19 outbreak (i.e., did not help at all or made things worse in some way)." Then they were asked, "Why were their actions unhelpful?" Finally, they were asked to "Describe any negative

Table 1 Demographics of Study 1 participants

	University staff employees	Registered nurses	Licensed engineers
N	196	192	183
Gender	Female = 150 Male = 44 Prefer not to say = 2	Female = 171 Male = 20 Nonbinary = 1	Female = 42 Male = 141
Age	20–74 $M = 41.19$ $SD = 13.52$	21–74 $M = 37.77$ $SD = 12.27$	23–74 $M = 43.00$ $SD = 12.09$
Race*	White = 119 Black = 37 Hispanic = 32 Asian = 8 Other = 6	White = 142 Hispanic = 26 Black = 16 Asian = 7 Pacific Islander = 3 Other = 4	White = 155 Hispanic = 13 Asian = 12 Black = 4 Pacific Islander = 2 Other = 3
Job status*	Full-time = 194 Part-time = 2 Contract worker = 1	Full-time = 166 Part-time = 21 Contract workers = 6	Full-time = 174 Part-time = 5 Contract workers = 5
Organizational tenure	*Med* = 5 years	*Med* = 4 years	*Med* = 5 years
Examples of job titles	Administrative assistant, academic program specialist, service coordinator, fiscal business specialist	Advanced practice registered nurse at CVS, certified registered nurse anesthetist in hospital setting, registered nurse in intensive care unit, labor and delivery nurse	Project engineer, county traffic engineer, civil engineer, forensic engineer
Work changes due to COVID-19*	16 working fewer hours, 30 working more hours, 149 doing more work remotely, 3 paid less, 51 performing different job tasks, 27 reported no changes	87 working fewer hours, 30 working more hours, 29 doing more work remotely, 13 paid more, 17 paid less, 48 performing different job tasks, 47 reported no changes	19 working fewer hours, 56 working more hours, 133 doing more work remotely, 1 paid more, 17 paid less, 21 performing different job tasks, 36 reported no changes

*Participants could select multiple categories

outcome(s) that occurred as a result of their ineffective help." Responses were combined for analysis.

Analysis

Data were analyzed using a content analysis approach (Weber, 1990) similar to that used in prior mentorship and support studies (Eby et al., 2000; Gray et al., 2020). The goal was to develop taxonomies of helpful and unhelpful leadership support that met four criteria. First, identified themes should be clearly conceptualized with thoughtful definitions. Second, themes should be disparate to avoid construct overlap. Third, the themes should be exhaustive so that every relevant incident is classifiable. Finally, the themes should be transferable to apply to scenarios beyond the specific incidents reported by participants (Gray et al., 2020; Weber, 1990). To achieve the criteria, five researchers followed a rigorous process to develop and validate the categorization schemes.

Taxonomy Development The responses were analyzed separately depending on the occupation of the recipient (i.e., nurse, engineer, or university staff) and the efficacy of the support (i.e., helpful versus unhelpful), resulting in six response sets for analysis (e.g., nurses' helpful support responses, nurses' unhelpful support responses, engineers' helpful support responses). Two researchers developed a taxonomy of leadership actions for each response set; five total researchers were involved in the process as illustrated in Table 2. The two researchers analyzing each response set began by independently reading the first 20 responses, identifying themes, and drafting definitions of those themes. Then, the two researchers met to discuss the themes and definitions and resolve any discrepancies to determine the most effective categorization scheme for the first 20 responses. Next, the researchers independently read the next 20 responses and either categorized the responses into existing themes, created new themes, and/or expanded the theme definitions so that each response could be classified. Then, the researchers met to discuss proposed changes to the taxonomy and determine the best approach to represent the first 40 responses. The two researchers engaged in an iterative approach until they had read all the responses and reached consensus on themes and definitions to optimally

Table 2 Developing taxonomies of helpful and unhelpful support from organizational leaders in Study 1

Qualitative data	Developed taxonomy	Validated taxonomy	Initial inter-rater agreement	Final inter-rater agreement
Helpful supportive incidents	A, B, C	D, E, A*	90.55%	100%
Helpful incidents reported by licensed engineers	B, C	D, E	90.77%	100%
Helpful incidents reported by licensed nurses	C, A	D, E	94.07%	100%
Helpful incidents reported by university staff	A, B	D, E	86.91%	100%
Unhelpful supportive incidents	A, D, E	B, C, A*	86.78%	100%
Unhelpful incidents reported by licensed engineers	D, E	B, C	82.04%	100%
Unhelpful incidents reported by licensed nurses	E, A	B, C	91.18%	100%
Unhelpful incidents reported by university staff	A, D	B, C	81.80%	100%

A, B, C, D, and E represent five researchers; *joined the raters during reconciliation meetings

capture every participant's response. Notably, although the responses were analyzed separately by occupation, the themes were similar enough across occupations that all researchers agreed the same themes could be applied to each occupation, resulting in two final taxonomies (i.e., helpful leadership actions and unhelpful leadership actions).

Inter-rater Agreement Two researchers uninvolved in developing each taxonomy independently coded every participant's response using the established categories to assess inter-rater agreement. First, the raters engaged in training to gain an understanding of and familiarity with the taxonomy. During rater training, raters practiced coding the nurses' responses with a taxonomy developer until they had high inter-rater reliability. Then, the raters coded the university staff and engineers' responses independently. Next, the raters returned to the nurses' dataset and coded nurses' responses independently.

Inter-rater agreement was calculated for each participant's response by taking the number of agreed upon codes divided by the total number of codes selected by both raters. Overall agreement for each dataset was computed by averaging the agreement of every response. See Table 3 for a detailed depiction of the approach. The initial agreement for the helpful support taxonomy was 90.55% (90.77% agreement on engineers' responses, 94.07% agreement on nurses' responses, 86.91% agreement on university staff's responses), and the initial agreement for the unhelpful support taxonomy was 86.78% (82.04% agreement on engineers' responses, 91.18% agreement on nurses' responses, 81.80% agreement on university staff's responses). For every response lacking full initial agreement, a discussion was held with a third researcher to reach consensus on the best categorization. This approach ensured that data were systematically, comprehensively, and exhaustively reviewed to meet the four taxonomy criteria.

Table 3 Illustrating the method for calculating initial inter-rater agreement in Study 1

Response	Coder	Category 1	Category 2	Category 3	Category 4	Initial inter-rater agreement
Participant 1	Coder 1	X				100%
	Coder 2	X				
Participant 2	Coder 1		X		X	100%
	Coder 2		X		X	
Participant 3	Coder 1	X				0%
	Coder 2		X			
Participant 4	Coder 1	X		X		50%
	Coder 2			X		
Participant 5	Coder 1		X	X		33.33%
	Coder 2		X		X	
Total						56.67%

This table is for illustrative purposes only. It does not display real data

Table 4 Themes that differentiate helpful and unhelpful support from organizational leaders during a crisis in Study 1

Theme	Helpful actions	Unhelpful actions
Autonomy	Demonstrating flexibility Seeking employee input	Taking an authoritarian approach Violating personal boundaries
Changes	-	Implementing impractical ideas Responding inconsistently
Communication	Maintaining personal communication Maintaining work-related communication	Communicating excessively Communicating insufficiently Delivering information poorly Spreading inaccurate information
Personal resources	Providing financial support Providing mental health resources Providing food tactfully	Providing food without considering dietary needs, safe delivery, or more pressing issues
Safety	Allowing telework Implementing on-site safety practices Providing safety equipment	Facilitating unsafe practices
Timing	Planning quickly and proactively	Making delayed decisions and actions
Tone	Spreading positivity	Placing blame Spreading distressing information
Work equipment	Providing work equipment	Implementing technology poorly
Workload	Maintaining desirable workload	Assigning illegitimate tasks Reducing staff numbers and hours

Higher Level Themes With the helpful and unhelpful leadership support taxonomies in place, three researchers collaboratively clustered the leadership actions into higher level themes that differentiated helpful and unhelpful leadership support (Hycner, 1985).

Results

Nurses, engineers, and university staff discussed 14 helpful leadership actions and 16 well-intended unhelpful actions. Researchers sorted the actions into nine clusters that differentiated helpful and unhelpful leadership support as illustrated in Table 4. Table 5 provides frequencies and example responses of the differentiating factors, which are summarized below.

Autonomy

Providing flexibility and seeking employees' input were reported as helpful, while taking an authoritarian approach was mentioned as unhelpful. For example, an engineer explained:

> [Leadership] understand the challenges that come with working from home related to taking care of children, helping with schoolwork, etc. so they have given us some flexibility with getting our normal work hours completed across a two-week period... i.e., instead of 40 hours per week [...]we need to get 80 hours over a two-week period with flexibility of distribution. [Their

actions have] kept productivity at a higher rate and reduced the stress level on their employees.

In contrast, a university employee said:

> [...] My boss instituted a daily check-in policy. [...] I know it was well-intentioned whereas she wanted to help us feel supported and keep communication easy and open, but this actually had the opposite effect for me. It felt as if she wanted a daily report of what I was doing each day in each meeting, which made me feel micromanaged. [It created] bad employee morale among my staff.

Changes

The pandemic called for leaders to implement organizational changes. While employees seemed open to change, they were less receptive to impractical or inconsistent changes. For example, a university employee was upset due to the:

> Constant change of tasks – more specifically, which tasks were now my responsibility and I needed to complete. They were unhelpful because they would change almost weekly, which made it hard to keep track of my responsibilities and what I needed to do. Tasks were sometimes not completed, which would negatively affect my emotional wellbeing.

Table 5 Themes and examples differentiating helpful and unhelpful support from organizational leaders during a crisis in Study 1

Theme	Helpful support example	Frequency	Unhelpful support example	Frequency
Autonomy	"I am allowed to work during hours that differ from the normal 8–5 so I can help my school age child complete his schoolwork as well as help with taking care of my other two children. Doing this allows me to get my work done on my own time, and I believe I am ultimately more productive because of this flexibility. [It has given me] complete satisfaction of my job overall with no desire to want to work elsewhere regardless of salary potential." -university staff	33 engineers (18.54%) 33 university staff (17.28%) 25 nurses (13.37%)	"Our director of core services has tried to make sure that others are doing what they are supposed to do. This is well-intended and sometimes catches tasks that are being dropped, but also cause[s] conflict and reduction in trust. It has created some stress and extra work to resolve these issues."—engineer	18 university staff (16.51%) 15 engineers (12.93%) 7 nurses (4.55%)
Changes	-	-	"Changes were often implemented then changed then reimplemented in just a week's time. [...] Things constantly changing are stressful enough and when they are not appropriately implemented it can be frustrating and wastes time trying to figure out what the appropriate protocol is. [Constant changes] increased stress and animosity between those writing the rules and those whom the rules affect." – nurse	28 engineers (24.14%) 30 nurses (19.48%) 13 university staff (11.93%)
Communication	"Kept lines of communication open; kept abreast of the situation. Released information on the current status of the outbreak as it pertains to our hospital system [...] It helped to know where everyone stood, who needed help, etc." – nurse	84 university staff (43.98%) 72 nurses (38.50%) 54 engineers (30.34%)	"The unveiling of the Employee Redeployment Program. Looking back, I understand the necessity of the program and the beneficial impact. However, when it was first introduced it caused me more stress than hope because so much was unknown about the program. It felt like there was no heads up [...] they did not explain what types of jobs I could be redeployed to and how often I might be called. This left me on edge [...]" – nurse	42 university staff (38.53%) 43 engineers (37.07%) 37 nurses (24.03%)
Personal resources	"My leaders have maintained daily [...] stress relief session[s] while working from home. [They help to] reduce stress and maintain a healthy working relationship." – nurse	22 nurses (11.76%) 10 university staff (5.24%) 9 engineers (5.06%)	"Giving us pizza, doughnuts, etc. [...] It had absolutely no [effect] on our direct care with Covid patients and how much management and leadership is asking from the [nursing] staff." – nurse	5 nurses (3.25%) 0 engineers (0.00%) 0 university staff (0.00%)
Safety	"One of the best things done at my facility was mandatory COVID testing of all patients that come to our unit. [...] Because of this change in policy, we as nurses had less exposure to COVID. By knowing who was positive, we could protect ourselves with the correct PPE." -nurse	107 engineers (60.11%) 100 nurses (53.48%) 70 university staff (36.65%)	"Purchased some masks and safety equipment, but not a push for people to wear them. [...] most did not use the safety equipment." -university staff	56 nurses (36.36%) 9 engineers (7.76%) 7 university staff (6.42%)
Timing	"Allowed me to work from home starting in March. We were told that we could work from home earlier than the President of [the university] ordered, so that those with underlying conditions could decide themselves whether they would self-isolate or not." -university staff	11 engineers (6.18%) 8 nurses (4.28%) 7 university staff (3.66%)	"I have made several suggestions on how we could do training and webinars online as educating the [university] community is part of our mission. However, my supervisor has delayed making a decision about doing these things online for over a month. I think if we would have started right away, we would be in a much better place as far as our mid-year goals." -university staff	6 university staff (5.50%) 6 engineers (5.17%) 4 nurses (2.60%)

Table 5 (continued)

Theme	Helpful support example	Frequency	Unhelpful support example	Frequency
Tone	"The regional team sent 'Happy Friday' emails to share numerous positive things that occurred during the week." —engineer	13 university staff (6.81%), 9 engineers (5.06%), 5 nurses (2.67%)	"[I did not appreciate] emails about the dangers of COVID. Seemed more like fear mongering." -nurse	10 engineers (8.62%), 11 nurses (7.14%), 3 university staff (2.75%)
Work equipment	"I was allowed to take all my necessary work equipment home, like computers, books, etc. [This was helpful] because at home I do not have 2 monitors to work with and this is a big difference to improve my productivity [...]" -engineer	39 engineers (21.91%), 32 university staff (16.75%), 2 nurses (1.07%)	"Made sure I had the appropriate technology to work at home. I have the appropriate technology, but it is not as up to date as my work computer. Sometimes work is performed slower or less efficiently due to working on a computer that is not my work computer." – university staff	7 university staff (6.42%), 2 engineers (1.72%), 1 nurse (0.65%)
Workload	"We normally have four to five patients each shift. During the outbreak, we only had three patients each, and more nurses were on the floor during each shift. This was helpful in having more time to be to safely put on our PPE and give more attention to each patient." – nurse	30 nurses (16.04%), 11 university staff (5.76%), 9 engineers (5.06%)	"Assigned additional and often excessive work several times per week in an effort to maintain regular communication among certain populations. Their actions increased workload during uncertain and stressful times. Anxiety levels increased [...]" – university staff	37 nurses (24.03%), 23 university staff (21.10%), 8 engineers (6.90%)

Helpful support: university staff n=191. engineers n=178. nurses n=187. Unhelpful support: university staff n=109. engineers n=116. nurses n=154. Percentages do not sum to 100% because some participants described multiple leadership actions

Communication

When asked for an example of helpful support, many employees reported incidents receiving personal and work-related communication from their leadership. A nurse reported:

> My supervisor has been sending out weekly updates specifically geared toward my role after her weekly meetings with top [...] leadership teams. [...] Myself and my peers start each week knowing exactly what to expect which is very helpful and comforting.

While weekly, targeted information was appreciated, an engineer explained:

> Every day we receive email communication with updates to our policies and new things that are being implemented because of COVID. These emails are well intended but not helpful. The quantity of emails is too much [...] Less time is spent on production when we have to read all of these policy emails.

When asked for an example of unhelpful support, many employees reported similar instances of excessive communication. Others described communication that was insufficient, inaccurate, or poorly delivered.

Personal Resources

Some leaders provided employees with personal resources, such as mental health resources, financial assistance, or food. An engineer felt supported when "Company resources for mental support, hotlines, and stress relief techniques [were] sent via email. […] Provided reassurance that people matter first […]" A nurse said, "[Leadership] fought for us to get an increase in pay while working the frontlines. The increase in pay helped to better support our families and made us feel appreciated during this difficult time." Food had more mixed reception as dietary restrictions and other issues were sometimes overlooked. As one nurse explained:

> Our unit manager has arranged to have food brought in several times. The food is unhelpful because while it was well-intended, it makes me feel like instead of hazard pay (in a COVID-ICU) we get a box of donuts.

Safety

Helpful leadership actions included allowing telework, implementing on-site safety practices, and providing safety equipment. To illustrate, a university staff employee reported that their leadership:

Only allowed 2 people to work in the room at a time [...] They closed our office space to only allow those persons who worked in the office. They hired a company to come in and clean and sanitize our workspaces. It limited the amount of contact we had with others. It kept our area and selves from coming into contact with germs [...] No one from our department has gotten sick [...]

In contrast, employees reported that leaders who facilitated unsafe practices were unhelpful. For example, an engineer described a leader who:

made wearing a mask optional if we go to the job site. [... It is] causing anxiety for those concerned about being around others that don't wear a mask or use hand sanitizer.

While some employees indicated that safety measures were restrictive, most employees spoke positively of leaders who fostered a strong safety climate.

Timing

Planning and adapting quickly to the crisis was helpful, while delayed decisions were unhelpful. Quick leadership decisions often mitigated uncertainty, increased productivity, and/or improved safety. A nurse indicated that:

Pre covid outbreak, [my Director of Nursing] already has a plan for us and to our patients [...] There are many cases of covid 19 in the nursing homes countrywide, because of our pre covid planning, we still have 0 cases in our facility. Our patients and employees are all safe.

Delayed decisions and actions fostered frustration and uncertainty among many employees. Sometimes, delayed decisions proved unactionable. For example, an engineer said their leadership:

Offered to order additional equipment that could help with videoconferencing, but by the time the offer was made, it's been nearly impossible to find any equipment in stock at a reasonable price. [Leadership's] slight delay in making the offer meant that by the time we looked to purchase equipment (webcams and microphones) these products were all but unavailable for purchase.

Tone

When asked to provide an example of helpful support, employees described leaders who spread positivity by sharing uplifting messages, demonstrating gratitude, or promoting social activities. A nurse said their leadership:

Wr[o]te uplifting messages in the break room daily. Forward[ed] messages from families that made us feel like we helped them as well as the patient. It brought some positivity to a bad situation. Reinforced teamwork and that we were all in it together.

In contrast, employees described unhelpful incidents of leaders fostering negativity by spreading distressing information or being accusatory. For example, a university staff employee said:

Some leaders [...] made scares about possibly budget cuts and lay-offs. [It] did not ease the nerves of people [who] were already on the brinks of not knowing what to do during these times. [They were having] discussions about the negativity people are already feeling and dealing with during these times instead of bringing hope. It was a drag.

Work Equipment

With many employees completing more of their work remotely, some employees reported the provision of home office equipment and other logistical tools as helpful support. The leader of a university staff employee:

Bought new laptop for my at home work. Brought me a desk chair from the office. The new laptop is up to date while my own laptop is 10 years old. My diabetic neuropathy has been somewhat relieved by using the ergonomic desk chair. I work efficiently [...]

However, employees described the provision of work equipment as unhelpful if equipment was implemented without the necessary support, training, or infrastructure. For example, a university staff employee was upset when her supervisor "move[d] to a web-based database without any support or training."

Workload

Demand for various goods and services changed drastically during the pandemic (Becdach et al., 2020). As a result, some leaders helped their employees by taking steps to protect them from work underload or work overload. A nonessential university employee explained that:

My manager has helped find me projects/work to do in other departments so I can continue to be on paid status. I am an event coordinator, so needless to say there hasn't been any in-person events to plan or execute. I have continued to be in full pay status.

While many efforts were effective, some leaders tried to optimize their employees' workload in undesirable ways, such as by reducing staff hours or assigning tasks that employees perceived as unnecessary or unreasonable (i.e., illegitimate tasks; Semmer et al., 2015). A nurse said their leadership had been "sending untrained help to lessen the workload. [It] took more time training and took away from care."

Study 1 Discussion

Many organizational leaders aimed to support their employees during a crisis, but not all of their well-intended actions were perceived as helpful. Employees described many well-intended, unhelpful leadership actions that align with forms of unhelpful workplace social support identified by Gray et al. (2020). For example, employees in this research described leaders who communicated excessively, such as sending lengthy and frequent emails, while trying to be helpful during the crisis. Excessive communication is an example of imposing support, unwanted support that is forced on the recipient (Gray et al., 2020). Employees in this research also provided incidents of leaders spreading distressing information while trying to be helpful. Such supportive actions can be classified as stress magnifying support, support that leads the recipient to focus more on stressors in a way that exacerbates the recipient's stress (Gray et al., 2020). Table 6 maps current findings of unhelpful supportive leadership actions during a crisis onto an established taxonomy of unhelpful workplace social support.

Beyond identifying unhelpful actions, nine themes emerged to help differentiate helpful and unhelpful leadership support during a crisis. These themes are particularly valuable because they capture aspects of the social support provided that explain their reception. While many factors that differentiate helpful and unhelpful support have been investigated, many are not easily actionable (e.g., genetic factors of the recipient). In addition to factors suggested by Bavik et al. (2020), we encourage future research to consider characteristics of the support provided to help explain the efficacy of workplace social support. The themes identified in this research may serve as a springboard for additional research seeking to explain the efficacy of various supportive actions.

Study 2

Study 1 used a qualitative approach to provide a cohesive, evidence-based framework to advance the understanding of helpful and unhelpful received leadership support during a crisis. Study 2 uses a quantitative methodology to replicate and extend the findings that helpful actions along eight of the

support dimensions are associated with better employee well-being during a crisis. The work equipment factor, providing resources to support at-home work, was not included because the sample was not restricted to employees working from home. Supervisors were chosen as the organizational leaders of focus for Study 2 to provide participants with a clear reference when answering scale items for the quantitative study.

The Role of Supervisor Support in the Stressor-Strain Model

The stressor-strain model provides a seminal framework for understanding employee well-being and gauging the effectiveness of support from organizational leaders, with most research investigating supervisor support (Mathieu et al., 2019). According to the model, stressors are events or situations that require an adaptive response by an employee (e.g., job insecurity), and strains are potential negative employee outcomes associated with exposure to stressors (e.g., burnout; Jex & Beehr, 1991). Supervisor support can serve as a protective resource that directly mitigates employee strains and/or buffers the relationship between stressors and strains (Cohen & Wills, 1985; House, 1981; Viswesvaran et al., 1999).

During the COVID-19 crisis, employees experienced increased job-related stressors and strains. One important stressor on the rise was job insecurity, conceptualized as the involuntary potential loss of continuity in a job situation (Greenhalgh & Rosenblatt, 1984). The US unemployment rate peaked to the highest level in over 70 years (Falk et al., 2021), and employees' fears of job loss were rampant (Sinclair et al., 2020). A vast literature links job insecurity with worse mental health and employee burnout (Jiang & Lavaysse, 2018), including during the pandemic (Wilson et al., 2020).

A second stressor exacerbated by the COVID-19 crisis was family-to-work conflict, particularly time-based family-to-work conflict. Time-based family-to-work conflict occurs when time devoted to family makes it difficult to engage in work (Carlson et al., 2000). School closures impacted at least 50.8 million public school students in the USA, which substantially increased the time demands of finding and/or engaging in childcare and homeschooling for many employed parents and caregivers (Cattan et al., 2020; Decker et al., 2020). For employees without children, widespread lockdowns often led to increased time spent with other family members in the home who could serve as interruptions or distractions during the workday. Allen et al. (2021) reported segmentation strategies employees employed to protect their work time, such as working while family members were not around or asleep to avoid distractions. Family-to-work conflict is linked with a host of strains, including burnout and health problems (Amstad et al., 2011).

Table 6 Mapping Study 1 findings of unhelpful leadership support during a crisis onto an established taxonomy of unhelpful workplace support

Established forms of unhelpful workplace support	Definition	Current research findings	Suggested changes to existing taxonomy
Conflicting social support	Social support in which multiple providers offer differing advice or instructions	Responding inconsistently	Expand the definition to also encompass frequently changing plans, policies, or statements; applying policies or providing resources inconsistently across employees
Critical social support	Social support that directly leads the recipient to feel insulted, criticized, and/or attacked	Placing blame	Expand the definition beyond being critical of the recipient; In some examples, a supervisor was critical of another entity to deflect responsibility away from the recipient, which was also unhelpful
Imposing social support	Social support that is unwanted and forced on the recipient in a non-critical manner	Communicating excessively Taking an authoritarian approach Violating personal boundaries	
Impractical social support	Social support that is unreasonable, misinforming, and/or leads the recipient to stray from company policy or general practices	Facilitating unsafe practices Implementing impractical ideas Reducing staff numbers and hours Spreading inaccurate information	
Incompatible social support	Social support in which the provider attempts to work with the recipient to help complete a task, but the provider and recipient work differently and struggle to work cohesively	Delivering information poorly	Expand the definition to include support that is provided a time that is incompatible with the recipient's schedule or is provided via a method that is incompatible with the support content (e.g., emails that should have been in-person conversations or vice versa)
Partial social support	Social support that does not benefit the recipient because it is incomplete, imprecise, or unclear	Communicating insufficiently Implementing technology poorly	
Poorly assigned social support	Social support in which a supervisor assigns an employee to help the recipient complete a task, but the assignment was untimely, unneeded, and/or low-quality	Assigning illegitimate tasks	
Shortsighted social support	Social support in which the provider takes over a task without teaching the recipient the skills to complete the task on their own in the future	-	
Stress magnifying social support	Social support that causes the recipient to focus more on the initial stressor in a way that exacerbates the recipient's stress	Spreading distressing information	
Uncomforting social support	Social support in which the provider tries to give emotional support (not advice or tangible assistance), but the recipient does not feel adequately comforted or validated	-	
Undependable social support	Social support in which the provider promises and/or attempts to complete a recipient's task, but the provider does it in an unreliable, delayed, or low-quality manner	Making delayed decisions and actions	Expand the definition to include forms of support beyond the completion of tasks

Established forms of unhelpful workplace social support and their definitions are taken from Gray et al. (2020)
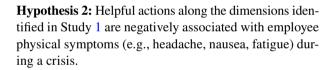
Table 7 Demographics of Study 2 participants

	Registered nurses	Licensed engineers
N	162	239
Sex	Female = 141 Male = 21	Female = 45 Male = 193 Other = 1
Age	23–75 M = 43.51 SD = 11.73	24–80 M = 49.54 SD = 13.08
Race*	American Indian = 1 Asian = 10 Black = 8 Hispanic = 21 Pacific Islander = 1 White = 122 Other = 4	Asian = 16 Black = 7 Hispanic = 22 White = 195 Other = 6
Job status*	Full-time = 134 Part-time = 25 Contract workers = 4	Full-time = 232 Part-time = 5 Contract workers = 3
Organizational tenure	Med = 3 years	Med = 7 years
Examples of job titles	ICU RN, nurse manager, ER RN, nurse anesthetist	Structural engineer, project engineer, mechanical engineer
Changes in work hours due to COVID-19	24 working fewer hours, 41 working more hours, 97 working same number of hours	22 working fewer hours, 20 working more hours, 197 working the same hours
Percentage of work time spent remotely	104 working entirely on-site, 12 working entirely remotely, 46 splitting their work between on-site and remote	46 working entirely on-site, 48 working entirely remotely, 145 splitting their work between on-site and remote

*Participants could select multiple categories

Researchers have highlighted the critical role of supervisors to support their employees as they navigate the unprecedented stressful circumstances of such crises (Charoensukmongkol & Phungsoonthorn, 2020; Sanchez et al., 1995; Shaw et al., 2020; Van Heugten, 2016). Using the stressor-strain model, researchers have proposed two primary mechanisms through which supervisor support can help employees. In the first model, the direct-effects model, supervisor support mitigates employee strains regardless of whether or not stressors are present (Viswesvaran et al., 1999). Supervisor support can have generalized beneficial effects by promoting positive experiences and increasing employee's comfort. For example, an employee may experience an increase in well-being after a supervisor spreads uplifting messages regardless of whether or not the employee was experiencing stressful workplace conditions during a crisis. Study 1 identified factors that are important to the efficacy of leaders' social support during a crisis. In Study 2, we hypothesize that employees of supervisors who performed helpful actions along these dimensions experienced less burnout and physical symptoms (e.g., headache, nausea, fatigue) during the crisis.

Hypothesis 1: Helpful actions along the dimensions identified in Study 1 are negatively associated with employee burnout during a crisis.

Hypothesis 2: Helpful actions along the dimensions identified in Study 1 are negatively associated with employee physical symptoms (e.g., headache, nausea, fatigue) during a crisis.

Supervisor support can also enhance employees' ability to cope with workplace stressors, which is demonstrated by a buffering/moderation effect (i.e., social support mitigates negative effects of job stressors; Viswesvaran et al., 1999). The buffering effect of social support has received mixed empirical support in existing literature (Mathieu et al., 2019). The stress-support matching hypothesis has been used to explain disparate findings; buffering effects of supervisor support are more likely when the support closely matches the employees' stressors and strains (de Jonge & Dormann, 2006). In this research, supportive actions were investigated that directly aligned with the context of a crisis. In Study 1, employees reported actions that helped them during the COVID-19 pandemic (e.g., providing autonomy to cope with increased family-to-work conflict). Therefore, we propose that helpful actions along the dimensions from Study 1 buffer the relationship between important job stressors (i.e., job insecurity and family-to-work conflict) and employee strains (i.e., burnout and physical symptoms) during a crisis.

Hypothesis 3: Helpful actions along the dimensions identified in Study 1 buffer the relationship between job insecurity and employee burnout during a crisis.

Hypothesis 4: Helpful actions along the dimensions identified in Study 1 buffer the relationship between job insecurity and physical symptoms during a crisis.

Hypothesis 5: Helpful actions along the dimensions identified in Study 1 buffer the relationship between family-to-work conflict and employee burnout during a crisis.

Hypothesis 6: Helpful actions along the dimensions identified in Study 1 buffer the relationship between family-to-work conflict and physical symptoms during a crisis.

Method

Participants

Participants were recruited via email using publicly available lists of Florida licensed nurses and Florida licensed engineers. Emails were sent to 24,978 nurses and 20,123 engineers, and 162 licensed nurses and 239 licensed engineers volunteered to complete the online survey. According to the survey distribution platform, Qualtrics, 89% of nurses and 61% of engineers who started the survey completed it. The nurses ranged in age from 23 to 75 ($M = 43.51$, $SD = 11.73$), and they were primarily female ($n = 141$, 87.04%). The engineers ranged in age from 24 to 80 ($M = 49.54$, $SD = 13.08$), and they were primarily male ($n = 193$, 80.75%). More demographic data are provided in Table 7. Data were collected between September 22, 2020 and November 19, 2020, amid the COVID-19 pandemic. The monthly rate of new confirmed COVID-19 cases in Florida ranged from 79,576

in September to 198,517 in November (Florida Department of Health, 2021).

Measures

Supervisor Support Supervisor support was measured with a scale developed for this research. The scale consists of eight subscales to measure helpful actions along eight of the support factors identified in Study 1. Each subscale had adequate internal consistency reliability ($\alpha = 0.83$–0.94 in the nurses' sample and $\alpha = 0.78$–0.95 in the engineers' sample). Details regarding the scale's development are provided below.

Four to six items were initially written to measure helpful actions along each of the eight leadership support factors based on qualitative responses from Study 1. For example, autonomy was measured with items such as "Since the start of COVID-19, my supervisor has given me freedom to structure my own workday." An example communication item is, "Since the start of COVID-19, my supervisor has provided clear updates about how my job is impacted by COVID-19." Tone was captured with items such as "Since the start of COVID-19, my supervisor has projected an optimistic vision of the future." The items reflect real experiences of employees from Study 1, providing evidence of validity based on the measure's content (i.e., content validity).

Using the nurses' responses ($n = 162$), item reliability analyses were conducted in SPSS 27 to narrow the scale to the top performing items. Based on the item-total correlations, Cronbach's alpha with item removed, and breadth of

Table 8 Correlations among Study 2 variables by occupation (nurses, $n = 162$; engineers, $n = 239$)

	1	2	3	4	5	6	7	8	9	10	11	12
1. Autonomy	-	.58**	.49**	.40**	.43**	.39**	.40**	.52**	− .46**	− .29**	− .08	− .22**
2. Changes	.51**	-	.74**	.60**	.70**	.72**	.70**	.75**	− .55**	− .36**	− .18*	− .15
3. Communication	.30**	.60**	-	.55**	.65**	.66**	.68**	.68**	− .41**	− .24**	− .09	− .05
4. Personal resources	.23**	.40**	.39**	-	.58**	.61**	.57**	.51**	− .48**	− .28**	− .15	− .15
5. Safety	.36**	.60**	.50**	.29**	-	.79**	.60**	.60**	− .40**	− .22**	− .14	− .13
6. Timing	.38**	.69**	.56**	.35**	.67**	-	.60**	.60**	− .36**	− .22**	− .13	− .08
7. Tone	.30**	.49**	.52**	.41**	.38**	.53**	-	.65**	− .46**	− .35**	− .20**	− .14
8. Workload	.36**	.45**	.45**	.30**	.36**	.45**	.44**	-	− .59**	− .42**	− .17*	− .21**
9. Burnout	− .27**	− .35**	− .31**	− .30**	− .23**	− .29**	− .41**	− .49**	-	.67**	.24**	.29**
10. Physical symptoms	− .31**	− .35**	− .32**	− .21**	− .17**	− .23**	− .25**	− .26**	.61**	-	.22**	.29**
11. Family-to-work ofct	− .02	− .13	− .08	− .10	.03	− .09	− .21**	− .25**	.36**	.08	-	.22**
12. Job insecurity	− .15*	− .22**	− .29**	− .27**	− .16*	− .21**	− .31**	− .29**	.30**	.21**	.20**	-

Correlations above the diagonal are for nurses. Correlations below the diagonal are for engineers. Descriptive statistics by occupation are reported in Table 10
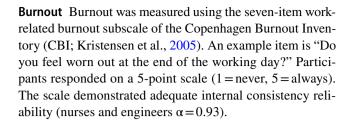
$^{**}p < .01$. $^{*}p < .05$

content, three items were selected for each subscale. Each retained item had a corrected item-total correlation above 0.60 with its respective subscale, and Cronbach's alpha of each subscale was well above the generally accepted 0.70 cutoff (0.83–0.94). An exploratory factor analysis was also performed in SPSS 27. Four eigenvalues were greater than one, and the scree plot showed points of inflection at six and eight factors. Because the items were designed to capture eight factors, an eight-factor solution was extracted using principle axis factoring with a promax rotation of the factor loading matrix. All items loaded at least 0.48 onto their respective factor, and all but one item had all cross-loadings less than 0.30. Four and six factor solutions were extracted for comparison; in both cases, multiple items loaded below 0.50 on their respective factors, and multiple items had cross-loadings over 0.30. The eight-factor solution was retained due to its alignment with the taxonomy, clearer interpretation, and better fit.

Because changes were made to the scale based on preliminary analyses, it was important to verify the structure in a different sample. The engineers' responses ($n = 239$) were used to run a confirmatory factor analysis to examine the eight correlated factors in SAS 9.4 using the CALIS Procedure (Yung, 2010). Although the x^2 measure of fit was statistically significant, $x^2(224) = 373.13$, $p < 0.05$, the descriptive measures indicated good model fit. The non-normed fit index (NNFI) and the comparative fit index (CFI) were higher than 0.95 as recommended by Hu and Bentler (1999; NNFI = 0.96, CFI = 0.96). The root-mean-square error of approximation (RMSEA) and the standardized root mean residual (SRMR) were lower than the 0.06 and 0.08 cutoffs recommended by Hu and Bentler (1999; RMSEA = 0.05, SRMR = 0.05). The final scale items are depicted in the Appendix.

Family-to-work Conflict Participants completed a three-item time-based family interference with work scale (Carlson et al., 2000). Participants responded to items such as "The time I spend on family responsibilities often interferes with my work responsibilities" on a five-point agreement scale (1 = strongly disagree, 5 = strongly agree). The internal consistency reliability of the scale was $\alpha = 0.89$ in the engineers' sample and $\alpha = 0.77$ in the nurses' sample.

Job Insecurity Participants completed three items with the highest factor loadings from the job security scale (Kraimer et al., 2005). An example item is "I am confident that I will be able to work for my organization as long as I wish." Participants responded on a five-point scale (1 = strongly disagree, 5 = strongly agree). Items were reverse scored to capture job insecurity. Cronbach's alpha was 0.86 in both the engineers' and nurses' samples.

Burnout Burnout was measured using the seven-item work-related burnout subscale of the Copenhagen Burnout Inventory (CBI; Kristensen et al., 2005). An example item is "Do you feel worn out at the end of the working day?" Participants responded on a 5-point scale (1 = never, 5 = always). The scale demonstrated adequate internal consistency reliability (nurses and engineers $\alpha = 0.93$).

Physical Symptoms Physical symptoms were measured using the 13-item Physical Symptoms Inventory (PSI; Spector & Jex, 1998). Participants were asked to report the frequency with which they experience a variety of physical symptoms such as an upset stomach, a backache, or trouble sleeping. They responded on a five-point scale (1 = not at all, 5 = several times per day). The scale demonstrated adequate internal consistency reliability (nurses $\alpha = 0.83$; engineers $\alpha = 0.80$).

Results

Study 2 correlations and descriptive statistics are provided in Tables 8 and 9. Supporting hypothesis 1, helpful actions along the dimensions identified in Study 1 were negatively associated with employees' burnout during COVID-19, nurses $rs = -0.36$ to -0.59, $ps < 0.01$, engineers $rs = -0.23$ to -0.49, $ps < 0.01$. To follow-up on the relationships between supportive supervisor actions and burnout, we investigated the relative associations between each of the helpful supportive behaviors and employee burnout. Because the helpful supportive behaviors were moderately correlated, we conducted relative weights analyses to mitigate concerns of multicollinearity. Johnson's (2000) relative weights analysis was conducted using an R program prepared by Tonidandel and LeBreton (2015). Together, the helpful supportive supervisor behaviors accounted for 44.09 percent of variance in employees' burnout during COVID-19 ($R^2 = 0.4409$). Confidence interval tests of significance suggest that the partial effect of each helpful supportive behavior was significant. In order of most to least variance in burnout explained, the helpful supportive behaviors pertained to workload, changes, autonomy, tone, personal resources, communication, timing, and safety (see Table 10). Notably, there were no significant differences in the relative weights of the helpful supportive behaviors on burnout between nurses and engineers (see Table 11). Supporting hypothesis 2, helpful actions along the dimensions identified in Study 1 were negatively associated with employees' physical symptoms (e.g., headache, nausea, fatigue), nurses $rs = -0.22$ to -0.42, $p < 0.01$, engineers $rs = -0.17$ to -0.35, $p < 0.01$. To follow-up on the relationships between supportive supervisor actions and physical symptoms, we investigated the relative associations between each of the helpful supportive behaviors and employees' physical

Table 9 Pooled within group correlations and descriptive statistics among Study 2 variables ($N=401$)

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Autonomy	3.90	1.04	-											
2. Changes	3.91	1.05	.55**	-										
3. Communication	3.65	1.14	.40**	.68**	-									
4. Personal resources	2.91	1.12	.31**	.51**	.47**	-								
5. Safety	4.13	1.01	.40**	.65**	.58**	.44**	-							
6. Timing	4.03	1.01	.38**	.70**	.61**	.49**	.74**	-						
7. Tone	3.78	1.01	.35**	.61**	.61**	.49**	.50**	.57**	-					
8. Workload	3.56	1.13	.45**	.63**	.57**	.41**	.49**	.54**	.56**	-				
9. Burnout	2.71	.91	− .37**	− .45**	− .36**	− .39**	− .31**	− .32**	− .43**	− .54**	-			
10. Physical symptoms	1.80	.52	− .30**	− .36**	− .28**	− .25**	− .20**	− .22**	− .30**	− .34**	.64**	-		
11. FTW conflict	2.11	.93	− .05	− .15**	− .08	− .12*	− .05	− .11*	− .20**	− .21**	.31**	.14**	-	
12. Job insecurity	2.03	.94	− .19**	− .18**	− .17**	− .21**	− .14**	− .14**	− .22**	− .24**	.29**	.25**	.21**	-

The pooled within-group correlation matrix was created by computing sums of squares and sums of products separately for each occupation against its own mean, and then pooling each term before computing the correlations

FTW family-to-work

**p < .01. *p < .05

symptoms. Together, the helpful supportive supervisor behaviors accounted for 27.48% of variance in employees' physical symptoms ($R^2=0.2748$). Confidence interval tests of significance suggest that the partial effect of each helpful supportive behavior was significant except for support pertaining to safety. In order of most to least variance in physical symptoms explained, the helpful supportive behaviors pertained to changes, autonomy, workload, tone, personal resources, communication, and timing (see Table 10). There were no significant differences in the relative weights of the helpful supportive behaviors on physical symptoms between nurses and engineers (see Table 11).

We tested hypothesis 3 through hypothesis 6 that helpful supportive behaviors buffer the relationship between stressors and strains during COVID-19 using moderated multiple regression analyses. We combined the engineering and nursing samples to provide sufficient statistical power. To control for sample differences, we first computed a pooled within-group correlation matrix (Finn, 1974). This approach computes sums of squares and sums of products separately for each group against its own mean, and then pools each term before computing the correlations. The correlation matrix, including product terms, was then input to conduct the multiple regression analyses. Supportive actions rarely moderated the stressor-strain relationships, failing to support hypotheses 3 through 6. Out of 32 moderation analyses to examine each support, stressor, and strain combination, we found no buffering effects of helpful actions and three reverse-buffering effects. Helpful support pertaining to autonomy and workload had reverse-buffering effects on the relationship between family-to-work conflict and burnout, $F(3, 397)=39.13$, $p<0.01$, β (product term) $=0.44$,

$t(397)=2.35$, $p=0.02$, $F(3, 397)=69.70$, $p<0.01$, β (product term) $=0.35$, $t(397)=2.76$, $p=0.01$, respectively. Helpful support pertaining to workload also had reverse-buffering effects on the relationship between family-to-work conflict and physical symptoms, $F(3, 397)=20.20$, $p<0.01$, β (product term) $=0.29$, $t(397)=1.98$, $p=0.049$. When applying a Bonferroni correction, none of the moderation analyses were significant, so the few detected effects should be interpreted with caution.

We conducted exploratory post hoc analyses to examine mean occupational differences in reports of helpful support, stressors, and strains. Engineers generally reported more helpful support, lower levels of stressors, and fewer strains than nurses (see Table 12). Previous research identified gender differences involving support, stressors, and strains (Blanch & Aluja, 2012; Drummond et al., 2017; Reichl et al., 2014), so we followed-up on the differences by performing multiple regression analyses to control for gender. Occupational differences were not generally attributable to gender; after controlling for gender, occupation remained a significant predictor in 10 out of 11 cases. Occupation was only a non-significant predictor of the amount of helpful communication reported, $F(2, 397)=3.57$, $p=0.03$, β (occupation) $= -0.06$, $t(397)= -0.84$, $p=0.40$.

We also conducted exploratory post hoc analyses to examine relationships between the percent of work time employees spent remotely and reports of helpful support, stressors, and strains. The percent of work time employees spent remotely was unrelated to stressors, positively associated with helpful support, and negatively associated with strains. Moderation analyses were conducted to investigate

Table 10 Relative weight analysis of helpful support predicting employees' burnout and physical symptoms in Study 2

	Raw relative weight	Rescaled relative weight	Confidence intervals around raw weights		Confidence interval tests of significance	
			Lower	Upper	Lower	Upper
DV: Burnout						
Autonomy	.07	15.52	.04	.10	.04	.10
Changes	.07	15.98	.05	.10	.04	.10
Communication	.02	4.85	.01	.03	.01	.04
Personal resources	.05	11.96	.03	.09	.02	.09
Safety	.02	4.56	.01	.03	.01	.03
Timing	.02	4.80	.01	.03	.01	.03
Tone	.06	12.64	.03	.09	.03	.09
Workload	.13	29.70	.09	.18	.09	.18
R^2	.44					
DV: Physical symptoms						
Autonomy	.06	22.59	.03	.10	.03	.10
Changes	.07	24.13	.04	.10	.04	.10
Communication	.02	5.71	.01	.03	.01	.03
Personal resources	.02	8.34	.01	.05	.01	.05
Safety	.01	3.87	.01	.02	-.00	.02
Timing	.01	4.99	.01	.02	.00	.03
Tone	.03	10.82	.01	.06	.01	.06
Workload	.05	19.54	.03	.09	.03	.09
R^2	.27					

If zero is not included in the confidence interval test of significance, weights are significant

whether relationships between the helpful support variables and strains depended on the percent of work time employees spent remotely. Support-strain relationships did not depend on the percent of work time employees spent remotely in 15 out of 16 cases. Only the relationship between helpful support pertaining to workload and physical symptoms depended on the percent of work time employees spent remotely; the negative variable relationship was stronger for employees who spent a lower percentage of their work time remotely, $F(3, 397) = 32.14$, $p < 0.01$, β (product term) $= 0.41$, $t(397) = 2.39$, $p = 0.02$.

Study 2 Discussion

Helpful supervisor actions along the support dimensions from Study 1 were associated with less burnout and fewer physical symptoms among employees. Together, the helpful supportive behaviors accounted for significant variability in employees' strains. These findings replicate and extend the findings of Study 1. In Study 1, employees provided examples of helpful and unhelpful support; Study 2 confirmed that the helpful supportive actions are associated with enhanced employee well-being. Findings from previous research and Study 1 demonstrate that not all well-intended supervisor actions are helpful during crises (Van Heugten, 2016). Findings of Study 2 advance the understanding of helpful support

and provide actionable insights for supervisors striving to effectively support their employees during a crisis.

General Discussion

While crisis management has been studied for decades, relatively little research attention has been given to leaders' role in protecting and promoting employees' well-being during crises (Bundy et al. 2017). Limited research that does investigate leadership support during crises generally considers support from organizational leaders to be a positive resource without acknowledging or investigating the potential for well-intended supportive leader behaviors to be unhelpful (see Sanchez et al., 1995; Shockley et al., 2021; Van Heugten, 2016 for exceptions). This research drew from emerging social support literature and the stressor-strain model to enhance the understanding of how organizational leaders can effectively support their employees during crises. Study 1 identified nine factors that differentiate helpful and unhelpful support during a crisis, and Study 2 confirmed that helpful actions along the dimensions were associated with less employee burnout and physical symptoms.

Table 11 Examining differences in relative weights of supervisor support between nurses and engineers in Study 2

	Nurses (n = 162)		Engineers (n = 239)		Confidence interval tests of significance	
	Raw relative weight	Rescaled relative weight	Raw relative weight	Rescaled relative weight	Lower	Upper
DV: Burnout						
Autonomy	.07	15.14	.02	6.75	-.00	.11
Changes	.07	15.56	.03	8.49	-.00	.09
Communication	.03	5.82	.02	6.21	-.03	.03
Personal resources	.07	16.28	.03	9.18	-.01	.11
Safety	.03	5.83	.01	2.53	-.01	.05
Timing	.02	4.53	.01	4.30	-.02	.02
Tone	.04	9.89	.06	20.55	-.09	.04
Workload	.12	26.95	.13	41.99	-.12	.08
R^2	.45		.31			
DV: Physical symptoms						
Autonomy	.03	11.25	.04	23.74	-.10	.03
Changes	.04	15.81	.04	22.82	-.09	.04
Communication	.01	5.73	.04	20.01	-.08	.01
Personal resources	.02	9.55	.01	6.96	-.03	.05
Safety	.01	4.07	.01	3.12	-.01	.02
Timing	.01	4.15	.01	5.46	-.02	.01
Tone	.04	17.05	.01	7.82	-.02	.08
Workload	.07	32.39	.02	10.06	-.00	.13
R^2	.45		.31			

If zero is not included in the confidence interval test of significance, weights are significantly different

Table 12 Examining mean differences in stressors, strains, and helpful supervisor support between nurses and engineers in Study 2

Variable	Nurses (n = 162)		Engineers (n = 239)		t tests	
	M	SD	M	SD	t	p
Stressors						
Family-to-work conflict	2.07	.92	2.14	.94	− .69	.49
Job insecurity	2.19	1.06	1.92	.85	2.69	.01
Strains						
Burnout	3.19	.97	2.39	.86	8.43	< .01
Physical symptoms	2.07	.59	1.62	.47	8.11	< .01
Supervisor support						
Autonomy	3.30	1.20	4.31	.93	− 9.06	< .01
Changes	3.27	1.32	4.34	.82	− 9.19	< .01
Communication	3.48	1.30	3.75	1.02	− 2.22	.03
Personal resources	2.60	1.24	3.12	1.03	− 4.35	< .01
Safety	3.87	1.17	4.30	.88	− 3.96	< .01
Timing	3.76	1.19	4.22	.87	− 4.24	< .01
Tone	3.51	1.17	3.96	.89	− 4.17	< .01
Workload	3.12	1.33	3.86	.97	− 6.10	< .01

Theoretical Implications

Only a small fraction of social support literature investigates the potential for support from organizational leaders to be unhelpful (e.g., Bavik et al., 2020; Beehr et al., 2010; Deelstra et al., 2003; Gray et al., 2020). This research contributes to the emerging literature by serving as the first known study to rigorously identify well-intended, supportive

leader actions that are unhelpful during a crisis. For example, employees reported incidents of leaders sending long, frequent emails detailing crisis news. While employees perceived those leaders were trying to be helpful by keeping employees informed, many employees felt burdened by the large quantity and length of such communication. Findings of unhelpful support suggest that there are boundary conditions to common theories of support (Hobfoll et al., 2018). For example, conservation of resources (COR) theory and Job-Demand-Control-Support (JDCS) theory traditionally posit that support is a beneficial resource (Hobfoll et al., 1990; Van Der Doef & Maes, 1999). Based on findings of this research, we argue that support from organizational leaders during crises may be a beneficial resource when careful consideration is given to nine themes: autonomy, communication, changes, personal resources, safety, time, tone, work equipment, and workload.

The themes identified in this research extend the understanding of a lesser-known theory of social support, the threat-to-self-esteem model (Fisher et al., 1982). The threat-to-self-esteem model suggests that all supportive actions contain elements of support and threat; the extent to which the recipient perceives the action as supportive versus threatening determines its receipt (Fisher et al., 1982). Researchers have drawn from the threat-to-self-esteem model to investigate characteristics of the support recipient that influence their perceptions of support (e.g., personality, attachment styles; see Bavik et al., 2020 for review). This research demonstrates that perceptions of social support may also be meaningfully explained by characteristics of the support provided. By identifying nine characteristics of the support itself that influence its helpfulness, this research provides more actionable explanations for the efficacy of various supportive behaviors during crises.

Finally, this research provided an examination of the role of social support in the stressor-strain model at a time when stressors and strains were exceedingly high (Hayes et al., 2020). In this research, we found support for the direct-effects model, although our findings do not support the buffering model of social support. The buffering effect of social support has received mixed empirical support in existing literature (Mathieu et al., 2019). In a quantitative review, Mathieu et al. (2019) reported that buffering effects were not consistently found, and reverse-buffering effects of social support were as common as buffering effects on stressor-strain relationships. Mathieu et al. (2019) explained that buffering effects were more commonly reported in studies measuring available support (i.e., perceptions that support would be available if needed) than received support (support that has actually been received; Mathieu et al., 2019). Perhaps buffering effects were not detected in this research because we investigated received support. Researchers have suggested that hypothesized buffering effects involving

received support are more likely when the support closely matches the stressors and strains (i.e., stress-support matching; de Jonge & Dormann, 2006). In this research, supportive actions were investigated that directly aligned with the crisis context (e.g., providing autonomy to cope with increased family-to-work conflict in a crisis). Despite considering stress-support matching, we did not detect moderation effects. While null and counter-intuitive findings should not be over-interpreted, this research adds to the body of non-significant and inconsistent findings on received support buffering effects. If these findings continue to emerge, researchers may benefit from re-evaluating the processes through which received support helps employees.

Practical Implications

During crises, organizational leaders are called to provide rapid support with little to no guidance. This research provides actionable insights for organizational leaders seeking to optimize their support during crises. Generally, organizational leaders may benefit from increased awareness that not all well-intended supportive actions are helpful. Specifically, organizational leaders may be able to enhance the helpfulness of their support by considering the features that we have identified as determining whether support is helpful or not.

Autonomy

Organizational leaders may help their employees cope with crises by providing employees with flexibility and control. Examples of supportive actions that promoted autonomy in this research were giving employees freedom to structure their work schedule, giving employees control over how they do their job, and allowing employees freedom to use allocated sick days for other purposes. Well-intended actions that diminish autonomy may not benefit employees' well-being (e.g., adding extra required meetings to provide emotional support, requiring employees to keep detailed time logs). Autonomy may be particularly important while employees adapt to and cope with novel challenges in a crisis.

Changes

Crises necessitate organizational changes from leadership. In this research, impractical or inconsistent changes were perceived as unhelpful. Asking for employee feedback may help organizational leaders stay abreast of when suggested changes are not feasible or understood.

Communication

Results of this research suggest that employees benefitted from clear, relevant information from their leadership to stay abreast of organizational plans to cope with a crisis. However, frequent, long-winded, and redundant email communication was frequently described as a nuisance. Organizational leaders may benefit from providing email updates on a weekly rather than daily basis and providing key information in the body of emails with a link to more detailed information during crises.

Personal Resources

Organizational leaders may help their employees cope with crises by providing personal resources, such as mental health resources, financial assistance, and food. In this research, mental health resources, such as links to meditation or self-help videos and information, were perceived as helpful. Financial assistance was also consistently perceived as helpful, but food had mixed reception. If providing food, organizational leaders may benefit from seeking employees' dietary preferences and restrictions, providing food in a safe manner that limits the spread of contagion, and making sure food is not provided in lieu of more pressing resources.

Safety

Employees' safety becomes a top priority during many crises. Employees in this research benefitted from steps organizational leaders took to promote employees' safety, such as allowing employees to work remotely when possible, providing personal protective equipment, and modeling safe behaviors. Notably, several employees expressed that the provision of safety equipment was insufficient on its own. Organizational leaders may consider making safety measures as convenient as possible, implementing clear safety policies, and personally modeling safe behaviors.

Timing

During a crisis, quick, thoughtful decisions may be especially helpful from organizational leadership. Amid uncertain times, delayed decisions may foster additional uncertainty and worry.

Tone

Crises naturally foster negativity and fear, and employees in this research benefitted from organizational leaders who spread positivity by conveying gratitude, hope, and fun. For example, organizational leaders may consider frequently thanking employees for their contributions, maintaining a calm, optimistic demeanor, and/or initiating optional virtual "happy hours." Dwelling on the negatives of a crisis, even when trying to demonstrate empathy, may be less helpful from organizational leaders.

Work Equipment

When crises change the nature of work, office equipment and other logistical tools may help employees adapt. Some employees may have an easier time using new technology than others, and optional technological training may benefit those who want and need it.

Workload

Organizational leaders may help their employees by being mindful of their employees' workload and taking steps to maintain manageable workloads for employees during crises. Importantly, some actions to manage employees' workload may have unintended effects (e.g., adding untrained help may increase rather than decrease workload, adding meaningless tasks to increase workload may drive frustration), so communication with employees may help to ensure supportive actions have positive effects.

Limitations and Future Directions

While this research aimed to investigate leadership support during crises, some of the findings may be specific to the circumstances of the COVID-19 pandemic. For example, promoting employees' safety may be less important to the efficacy of support provision when employees are not fearful of exposure to a life-threatening virus. The support themes identified in this research explained substantial variance in employees' burnout and physical symptoms during COVID-19 across two disparate occupations, but it is unclear if they would do so during other types of crises (e.g., natural disasters, technological crises, terrorist attacks). Future research should seek to replicate findings of this study during other types of crises to examine their generalizability to other contexts.

Notably, this research aimed to examine the effectiveness of support from organizational leaders, but effectiveness was narrowly operationalized. Study 1 relied on employees' perceptions of helpful and unhelpful leadership support. In some cases, employees' perceptions may not align with the best interests of organizations or society at large. For example, some employees mentioned excessive timesheets and monitoring as unhelpful support, but it is unclear from this research if oversight helped to boost employees' productivity. Study 2 confirmed that actions employees deemed as helpful in Study 1 were negatively associated with employee burnout and physical symptoms, but future research would

be beneficial to investigate a broader variety of employee and organizational outcomes.

On the topic of operationalization, the helpful supervisor support measure created in this research has only been used in our two quantitative, self-report samples. With our qualitative data and two quantitative samples, we were able to examine helpful supervisor support, using a measure that demonstrated acceptable internal consistency reliability and initial evidence for validity. The scale items were derived from the experiences of employees in the qualitative study, providing initial evidence of content validity. Cronbach's alpha across two samples of employees indicated adequate internal consistency reliability, and factor analyses provided initial support for factorial validity. The helpful supervisor support subscales related to stressors and strains as expected, providing initial evidence of criterion-related validity. Further scale development work using different samples and methods would be beneficial. For example, test–retest reliability could be examined by administering the scale over time, and inter-rater reliability could be examined by comparing responses of employees working with the same supervisor. Evidence of convergent and discriminant validity could be examined by administering measures of similar and dissimilar constructs along with the new helpful supervisor support measure that views support from a uniquely precise perspective of specific supervisor behaviors. This research introduces the new scale and paves the way for such future validation efforts.

Future research would also be interesting to integrate crisis leadership support findings into leadership theories in addition to theories of social support. For example, servant leadership theory posits that servant leaders are guided by their desire to serve, which drives them to lead; servant leaders put their employees' needs, aspirations, and interests above their own (Greenleaf, 1997; Sendjaya & Sarros, 2002). Perhaps servant leaders are more inclined to provide helpful rather than unhelpful support to employees during crises because they are driven to consider and fulfill employees' needs. Alternatively, perhaps servant leaders desire to serve others without understanding how to best do so. Future intervention research would be beneficial to examine if training on social support provision skills would increase the efficacy of support from well-intended leaders, such as servant leaders, during crises.

Literature on common method bias suggests that researchers should be concerned with "extraneous and unintended systematic influences on a measured variable, some of which might be shared with other measured variables (CMV) and some of which is not (UMV)" (Spector et al., 2019, p. 856). For example, one potential source of bias with self-report measures is mood. Perhaps employees may report receiving more helpful support and experiencing less strains when they have a positive mood. Fortunately, existing cross-sectional research found that controlling for mood did not change the significance of findings involving social support, burnout, and physical symptoms (see Gray et al., 2020). Future research should strive to rule out other potential sources of bias that may influence the measures used in this and other research. However, common method variance should not be assumed simply because Study 2 was cross-sectional self-report (Conway & Lance, 2010; Spector, 2006).

Conclusion

When tensions run high, such as during a crisis, leaders should be especially careful to provide helpful and avoid providing unhelpful support. This is the first known research to investigate the efficacy of organizational leaders' responses to a crisis and provide specific insights to inform what employees do and do not appreciate from their leadership during a crisis. Researchers and practitioners can use the findings to help optimize crisis leadership.

Appendix

Scale Items to Measure Helpful Supervisor Support in Study 2

Since the start of COVID-19, my supervisor has…

Given me flexibility over my work schedule. (Autonomy 1).

Given me control over how I do my job. (Autonomy 2).

Given me freedom to structure my own workday. (Autonomy 3).

Implemented reasonable changes to cope with COVID-19. (Changes 1).

Implemented an appropriate number of changes at work. (Changes 2).

Considered employees' perspective when making changes. (Changes 3).

Regularly checked-in to ask how I am doing. (Communication 1).

Provided clear updates about how my job is impacted by COVID-19. (Communication 2).

Provided an appropriate number of work-related updates. (Communication 3).

Provided financial support to help me cope with COVID-19. (Personal resources 1).

Provided health benefits to help me cope with COVID-19. (Personal resources 2).

Provided mental health resources to help me cope with COVID-19. (Personal resources 3).

Implemented safety measures to reduce the chances of COVID-19 exposure. (Safety 1).

Enforced safety measures to reduce the chances of COVID-19 exposure. (Safety 2).

Modeled safe practices to reduce the chances of COVID-19 exposure. (Safety 3).

Been quick to make appropriate changes to cope with COVID-19. (Timing 1).

Planned quickly to adapt to COVID-19. (Timing 2).

Quickly implemented necessary changes. (Timing 3).

Projected an optimistic vision of the future. (Tone 1).

Instilled hope that everyone will get through COVID-19. (Tone 2).

Spread uplifting messages. (Tone 3).

Ensured I have a desirable workload. (Workload 1).

Made sure I have a reasonable amount of work to do. (Workload 2).

Provided an appropriate amount of work assignments. (Workload 3).

References

Aguiar-Quintana, T., Nguyen, T. H. H., Araujo-Cabrera, Y., & Sanabria-Díaz, J. M. (2021). Do job insecurity, anxiety and depression caused by the COVID-19 pandemic influence hotel employees' self-rated task performance? The moderating role of employee resilience. *International Journal of Hospitality Management, 94*, 102868. https://doi.org/10.1016/j.ijhm.2021.102868

Allen, T. D., Merlo, K., Lawrence, R. C., Slutsky, J., & Gray, C. E. (2021). Boundary management and work-nonwork balance while working from home. *Applied Psychology, 70*(1), 60–84. https://doi.org/10.1111/apps.12300

Amstad, F. T., Meier, L. L., Fasel, U., Elfering, A., & Semmer, N. K. (2011). A meta-analysis of work–family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations. *Journal of Occupational Health Psychology, 16*(2), 151–169. https://doi.org/10.1037/a0022170

Bavik, Y. L., Shaw, J. D., & Wang, X.-H. (2020). Social support: Multidisciplinary review, synthesis, and future agenda. *Academy of Management Annals, 14*(2), 726–758. https://doi.org/10.5465/annals.2016.0148

Beehr, T. A., Farmer, S. J., Glazer, S., Gudanowski, D. M., & Nair, V. N. (2003). The enigma of social support and occupational stress: Source congruence and gender role effects. *Journal of Occupational Health Psychology, 8*(3), 220–231. https://doi.org/10.1037/1076-8998.8.3.220

Beehr, T. A., Bowling, N. A., & Bennett, M. M. (2010). Occupational stress and failures of social support: When helping hurts. *Journal of Occupational Health Psychology, 15*(1), 45–59. https://doi.org/10.1037/a0018234

Blanch, A., & Aluja, A. (2012). Social support (family and supervisor), work–family conflict, and burnout: Sex differences. *Human Relations, 65*(7), 811–833. https://doi.org/10.1177/0018726712440471

Blau, G. (1981). An empirical investigation of job stress, social support, service length, and job strain. *Organizational Behavior and Human Performance, 27*(2), 279–302. https://doi.org/10.1016/0030-5073(81)90050-7

Bundy, J., Pfarrer, M. D., Short, C. E., & Coombs, W. T. (2017). Crises and crisis management: Integration, interpretation, and research development. *Journal of Management, 43*(6), 1661–1692. https://doi.org/10.1177/0149206316680030

Carlson, D. S., Kacmar, K. M., & Williams, L. J. (2000). Construction and initial validation of a multidimensional measure of work–family conflict. *Journal of Vocational Behavior, 56*(2), 249–276. https://doi.org/10.1006/jvbe.1999.1713

CDC. (2020). *Community, work, and school*. Centers for Disease Control and Prevention. https://www.cdc.gov/coronavirus/2019-ncov/community/mental-health-non-healthcare.html

Charoensukmongkol, P., & Phungsoonthorn, T. (2020). The effectiveness of supervisor support in lessening perceived uncertainties and emotional exhaustion of university employees during the COVID-19 crisis: The constraining role of organizational intransigence. *The Journal of General Psychology*, 1–20. https://doi.org/10.1080/00221309.2020.1795613

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*(2), 310–357. https://doi.org/10.1037/0033-2909.98.2.310

Conway, J. M., & Lance, C. E. (2010). What reviewers should expect from authors regarding common method bias in organizational research. *Journal of Business and Psychology, 25*(3), 325–334. https://doi.org/10.1007/s10869-010-9181-6

Costabile, T. (2020). *Engineers in Action During COVID-19*. https://www.asme.org/topics-resources/content/engineers-in-action-during-covid-19

Cutrona, C. E., & Russell, D. W. (1990). Type of social support and specific stress: Toward a theory of optimal matching. In *Social support: An interactional view* (pp. 319–366). J. Wiley & Sons.

Daniels, K., & Guppy, A. (1994). Occupational stress, social support, job control, and psychological well-being. *Human Relations, 47*(12), 1523–1544. https://doi.org/10.1177/001872679404701205

de Jonge, J., & Dormann, C. (2006). Stressors, resources, and strain at work: A longitudinal test of the triple-match principle. *Journal of Applied Psychology, 91*(6), 1359–1374. https://doi.org/10.1037/0021-9010.91.5.1359

Decker, S., Peele, H., & Riser-Kositsky, M. (2020, July 1). The coronavirus spring: The historic closing of U.S. schools (a timeline). *Education Week*.

Deelstra, J. T., Peeters, M. C. W., Schaufeli, W. B., Stroebe, W., Zijlstra, F. R. H., & van Doornen, L. P. (2003). Receiving instrumental support at work: When help is not welcome. *Journal of Applied Psychology, 88*(2), 324–331. https://doi.org/10.1037/0021-9010.88.2.324

Dong, E., Du, H., & Gardner, L. (2020). An interactive web-based dashboard to track COVID-19 in real time. *The Lancet Infectious Diseases, 20*(5), 533–534. https://doi.org/10.1016/S1473-3099(20)30120-1

Drummond, S., O'Driscoll, M. P., Brough, P., Kalliath, T., Siu, O.-L., Timms, C., Riley, D., Sit, C., & Lo, D. (2017). The relationship of social support with well-being outcomes via work–family conflict: Moderating effects of gender, dependants and nationality. *Human Relations, 70*(5), 544–565. https://doi.org/10.1177/0018726716662696

Eby, L. T., McManus, S. E., Simon, S. A., & Russell, J. E. A. (2000). The protege's perspective regarding negative mentoring experiences: The development of a taxonomy. *Journal of Vocational Behavior, 57*(1), 1–21. https://doi.org/10.1006/jvbe.1999.1726

Falk, G., Carter, J. A., Nicchitta, I. A., Nyhof, E. C., & Romero, P. D. (2021). *Unemployment rates during the COVID-19 pandemic:*

In brief (No. R46554; pp. 1–16). Congressional Research Service.

Finn, J. D. (1974). *A general model for multivariate analysis*. Holt, Rinehart & Winston.

Fisher, J. D., Nadler, A., & Whitcher-Alagna, S. (1982). Recipient reactions to aid. *Psychological Bulletin, 91*(1), 27–54. https://doi.org/10.1037/0033-2909.91.1.27

Florida Department of Health. (2021). *Florida COVID19 Case Line Data*. https://open-fdoh.hub.arcgis.com/datasets/florida-covid19-case-line-data-3?selectedAttribute=Case1

Ganster, D. C., & Rosen, C. C. (2013). Work stress and employee health: A multidisciplinary review. *Journal of Management, 39*(5), 1085–1122. https://doi.org/10.1177/0149206313475815

Gephart, R. P. (2004). Qualitative research and the Academy of Management Journal. *Academy of Management Journal, 47*(4), 454–462. https://doi.org/10.5465/amj.2004.14438580

Gibson, J., Gallagher, M., & Tracey, A. (2011). Workplace support for traumatically bereaved people. *Bereavement Care, 30*(2), 10–16. https://doi.org/10.1080/02682621.2011.577998

Gleason, M. E. J., Iida, M., Bolger, N., & Shrout, P. E. (2003). Daily supportive equity in close relationships. *Personality and Social Psychology Bulletin, 29*(8), 1036–1045. https://doi.org/10.1177/0146167203253473

Gray, C. E., Spector, P. E., Lacey, K. N., Young, B. G., Jacobsen, S. T., & Taylor, M. R. (2020). Helping may be harming: Unintended negative consequences of providing social support. *Work & Stress, 34*(4), 359–385. https://doi.org/10.1080/02678373.2019.1695294

Greenhalgh, L., & Rosenblatt, Z. (1984). Job Insecurity: Toward conceptual clarity. *The Academy of Management Review, 9*(3), 438–448. https://doi.org/10.2307/258284

Hayes, S., Priestley, J. L., Ishmakhametov, N., & Ray, H. E. (2020). *"I'm not working from home, I'm living at work": Perceived stress and work-related burnout before and during COVID-19* [Preprint]. PsyArXiv. https://doi.org/10.31234/osf.io/vnkwa

Van Heugten, K. (2016). Supporting human service workers following the Canterbury earthquakes. *Aotearoa New Zealand Social Work*, *25*(2), 35–44. https://doi.org/10.11157/anzswj-vol25iss2id79

House, J. S. (1981). *Work stress and social support*. Addison-Wesley Publishing Company.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1–55.

Hycner, R. H. (1985). Some guidelines for the phenomenological analysis of interview data. *Human Studies, 8*(3), 279–303.

Jex, S. M., & Beehr, T. A. (1991). Emerging theoretical and methodological issues in the study of work-related stress. *Research in Personnel and Human Resources Management*, *9*(31), l–365.

Jiang, L., & Lavaysse, L. M. (2018). Cognitive and affective job insecurity: A meta-analysis and a primary study. *Journal of Management, 44*(6), 2307–2342. https://doi.org/10.1177/0149206318773853

Johns Hopkins University of Medicine. (2020). *Impact of opening and closing decisions in Florida*. Johns Hopkins Coronavirus Resource Center. https://coronavirus.jhu.edu/data/state-timeline

Johnson, J. W. (2000). A heuristic method for estimating the relative weight of predictor variables in multiple regression. *Multivariate Behavioral Research, 35*(1), 1–19. https://doi.org/10.1207/S15327906MBR3501_1

Kraimer, M., Wayne, S., Liden, R., & Sparrowe, R. (2005). The role of job security in understanding the relationship between employees' perceptions of temporary workers and employees' performance. *Journal of Applied Psychology, 90*, 389–398. https://doi.org/10.1037/0021-9010.90.2.389

Kristensen, T. S., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work & Stress, 19*(3), 192–207. https://doi.org/10.1080/02678370500297720

Lim, V. K. G. (1996). Job insecurity and its outcomes: Moderating effects of work-based and nonwork-based social support. *Human Relations, 49*(2), 171–194. https://doi.org/10.1177/001872679604900203

Maben, J., & Bridges, J. (2020). Covid-19: Supporting nurses' psychological and mental health. *Journal of Clinical Nursing, 29*, 2742–2750. https://doi.org/10.1111/jocn.15307

Mathieu, M., Eschleman, K. J., & Cheng, D. (2019). Meta-analytic and multiwave comparison of emotional support and instrumental support in the workplace. *Journal of Occupational Health Psychology, 24*(3), 387–409. https://doi.org/10.1037/ocp0000135

Nahum-Shani, I., & Bamberger, P. A. (2011). Explaining the variable effects of social support on work-based stressor–strain relations: The role of perceived pattern of support exchange. *Organizational Behavior and Human Decision Processes, 114*(1), 49–63. https://doi.org/10.1016/j.obhdp.2010.09.002

Reichl, C., Leiter, M. P., & Spinath, F. M. (2014). Work–nonwork conflict and burnout: A meta-analysis. *Human Relations, 67*(8), 979–1005. https://doi.org/10.1177/0018726713509857

Robinon, L., Kocum, L., Loughlin, C., Bryson, L., & Dimoff, J. K. (2015). I wanted you to know: Breast cancer survivors' control of workplace communication about cancer. *Journal of Occupational Health Psychology, 20*(4), 446–456. https://doi.org/10.1037/a0039142

Sanchez, J. I., Korbin, W. P., & Viscarra, D. M. (1995). Corporate support in the aftermath of a natural disaster: Effects on employee strains. *Academy of Management Journal, 38*(2), 504–521. https://doi.org/10.5465/256690

Seidman, G., Shrout, P. E., & Bolger, N. (2006). Why is enacted social support associated with increased distress? Using simulation to test two possible sources of spuriousness. *Personality and Social Psychology Bulletin, 32*(1), 52–65. https://doi.org/10.1177/0146167205279582

Shaw, W. S., Main, C. J., Findley, P. A., Collie, A., Kristman, V. L., & Gross, D. P. (2020). Opening the workplace after COVID-19: What lessons can be learned from return-to-work research? *Journal of Occupational Rehabilitation, 30*(3), 299–302. https://doi.org/10.1007/s10926-020-09908-9

Shockley, K. M., Allen, T. D., Dodd, H., & Waiwood, A. M. (2021). Remote worker communication during COVID-19: The role of quantity, quality, and supervisor expectation-setting. *Journal of Applied Psychology, 106*(10), 1466–1482. https://doi.org/10.1037/apl0000970

Shumaker, S. A., & Brownell, A. (1984). Toward a theory of social support: Closing conceptual gaps. *Journal of Social Issues, 40*(4), 11–36. https://doi.org/10.1111/j.1540-4560.1984.tb01105.x

Sinclair, R. R., Allen, T., Barber, L., Bergman, M., Britt, T., Butler, A., Ford, M., Hammer, L., Kath, L., Probst, T., & Yuan, Z. (2020). Occupational health science in the time of COVID-19: Now more than ever. *Occupational Health Science, 4*(1–2), 1–22. https://doi.org/10.1007/s41542-020-00064-3

Spector, P. E. (2006). Method variance in organizational research: Truth or urban legend? *Organizational Research Methods, 9*(2), 221–232. https://doi.org/10.1177/1094428105284955

Spector, P. E., & Jex, S. M. (1998). Development of four self-report measures of job stressors and strain: Interpersonal conflict at work scale, organizational constraints scale, quantitative workload inventory, and physical symptoms inventory. *Journal of Occupational Health Psychology, 3*(4), 356–367.

Spector, P. E., Rosen, C. C., Richardson, H. A., Williams, L. J., & Johnson, R. E. (2019). A new perspective on method variance:

A measure-centric approach. *Journal of Management, 45*(3), 855–880. https://doi.org/10.1177/0149206316687295

Sun, W., Chen, K., Terhaar, A., Wiegmann, D. A., Heidrich, S. M., Tevaarwerk, A. J., & Sesto, M. E. (2016). Work-related barriers, facilitators, and strategies of breast cancer survivors working during curative treatment. *Work, 55*(4), 783–795. https://doi.org/10.3233/WOR-162449

Thoits, P. A. (1995). Stress, coping, and social support processes: Where are we? What next? *Journal of Health and Social Behavior, 35*, 53. https://doi.org/10.2307/2626957

Tonidandel, S., & LeBreton, J. M. (2015). RWA Web: A free, comprehensive, web-based, and user-friendly tool for relative weight analyses. *Journal of Business and Psychology, 30*(2), 207–216. https://doi.org/10.1007/s10869-014-9351-z

Visweswaran, C., Sanchez, J. I., & Fisher, J. (1999). The role of social support in the process of work stress: A meta-analysis. *Journal of Vocational Behavior, 54*(2), 314–334. https://doi.org/10.1006/jvbe.1998.1661

Weber, R. (1990). *Basic content analysis*. SAGE Publications, Inc. https://doi.org/10.4135/9781412983488

Wilson, J. M., Lee, J., Fitzgerald, H. N., Oosterhoff, B., Sevi, B., & Shook, N. J. (2020). Job insecurity and financial concern during the COVID-19 pandemic are associated with worse mental health. *Journal of Occupational and Environmental Medicine, 62*(9), 686–691. https://doi.org/10.1097/JOM.0000000000001962

Yung, Y.-F. (2010). *Introduction to structural equation modeling using the CALIS Procedure in SAS/STAT software*. 1–149.

Hobfoll, S. E., Halbesleben, J., Neveu, J. P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior, 5,* 103–128.

Hobfoll, S. E., Freedy, J., Lane, C., & Geller, P. (1990). Conservation of social resources: Social support resource theory. *Journal of Social and Personal Relationships, 7*(4), 465–478.

Becdach, C., Brown, B., Halbardier, F., Henstorf, B., & Murphy, R. (2020). *Rapidly forecasting demand and adapting commercial plans in a pandemic*. McKinsey & Company. https://www.mckinsey.com/industries/consumer-packagedgoods/our-insights/rapidly-forecasting-demand-and-adapting-commercial-plans-in-a-pandemic#

Semmer, N. K., Jacobshagen, N., Meier, L. L., Elfering, A., Beehr, T. A., Kälin, W., & Tschan, F. (2015). Illegitimate tasks as a source of work stress. *Work & Stress, 29*(1), 32–56. https://doi.org/10.1080/02678373.2014.1003996.