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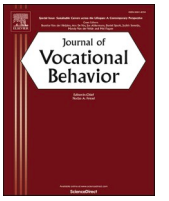

COVID-19 and employee job performance trajectories: The moderating effect of different sources of status

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ABSTRACT

This study investigates the impact of the COVID-19 pandemic on employee job performance trajectories, and further examines the moderating effects of different sources of status. Drawing from event system theory (EST), we propose that employee job performance decreases upon COVID-19 onset, but gradually increases during the postonset period. Furthermore, we argue that status from society, occupation, and workplace functions to moderate such performance trajectories. We test our hypotheses with a unique dataset of 708 employees that combines survey responses and job performance archival data over 21 consecutive months (10,808 observations) spanning the preonset, onset, and postonset periods of the initial encounter with COVID-19 in China. Utilizing discontinuous growth modeling (DGM), our findings indicate that the onset of COVID-19 created an immediate decrease in job performance, but such decrease was weakened by higher occupation and/or workplace status. However, the postonset period resulted in a positive employee job performance trajectory, which was strengthened for employees with lower occupational status. These findings enrich our understanding of COVID-19's impact on employee job performance trajectories, highlight the role of status in moderating such changes over time, and also provide practical implications to understand employee performance when facing such a crisis.

The COVID-19 pandemic is "the biggest test the world has faced since the Second World War" (United Nations, 2020) and has created unprecedented challenges for firms to manage their employees. This is particularly salient in China, where COVID-19 was first encountered and firms did not have sufficient knowledge and preparation to manage the workplace implications of such pandemic. Despite its unexpected onset, it is critical for firms to manage the unprecedented economic disruptions from COVID-19 (Delardas et al., 2022) with its large negative disruptions to employees. For instance, existing studies have found that the pandemic results in increased anxiety, depression, emotional suppression, and less need fulfillment, which in turn impair employee engagement, satisfaction, well-being, and proactive behaviors (Hu et al., 2020; Liu et al., 2021; Newman et al., 2022).

To counter the negative economic effects of COVID-19, firms need employees to have high job performance, referring to the extent to which employees devote themselves to their work and contribute to the organization's goals (Campbell & Wiernik, 2015). Employee

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job performance is the basis of organizational performance (Campbell & Wiernik, 2015) and is a vital factor in providing firms with the ability to survive and recover from adverse conditions (Mansour et al., 2019) such as those created by such pandemic. Further, a more comprehensive understanding of employee job performance requires a "theoretically oriented understanding of performance over time" (Carpini et al., 2017, p. 78). Thus, to extend knowledge in this literature, we examine the impact of the COVID-19 pandemic on employee job performance, and more specifically, the trajectories of job performance before, during, and after the initial onset of the COVID-19 pandemic. In doing so, we add to the emerging literature which has primarily shown the impact of COVID-19 on employees' work attitudes and behaviors (e.g., Lin et al., 2021; Liu et al., 2021; McFarland et al., 2020; Min et al., 2021; Shoss et al., 2021) but has yet to examine its impact on employee job performance trajectories.

We draw upon event system theory (EST; Morgeson et al., 2015) and build on recent research on COVID-19 (for reviews, see Kniffin et al., 2021; Newman et al., 2022) to propose that such pandemic elicits a discontinuous change in employee job performance, specifically a steep decline upon onset, followed by a gradual postonset recovery. EST (Morgeson et al., 2015) posits that an event constitutes three key characteristics: novelty (i.e., "a new or unexpected phenomenon", p. 520), disruption ("a discontinuity in the environment", p. 521), and criticality ("the degree to which an event is important, essential, or a priority", p. 521) in order to become salient to individuals. EST further proposes that such events require special attention as it triggers in-depth interpretation and brings fundamental changes, thereby significantly influencing individual behaviors. Since COVID-19 is unexpected, interrupts existing routines, and significantly affects long-term development, EST provides an appropriate framework for the systematic study of COVID-19's impacts on employee job performance trajectories (Roulet & Bothello, 2022).

We also further investigate the conditions under which job performance trajectories are strengthened or weakened. EST suggests that situational resources function to influence how individuals react towards the salient event (Morgeson et al., 2015). Since status reflects employees' social hierarchy in society or the workplace, and is associated with the possession of valued resources that ultimately contribute to one's survival and success in the workplace (Waldron, 1998), we introduce status as a moderator that influences employee job performance trajectories due to COVID-19. We investigate different sources of status that can be utilized by the employee to manage COVID-19 as moderating factors. Specifically, we focus on status stemming from society (Christie & Barling, 2009; Wanberg et al., 2020), occupation (Ashforth & Kreiner, 1999; Schaubroeck et al., 2018), and workplace (Djurdjevic et al., 2017).

Together, our research elucidates *whether* and *when* employee job performance changes *over time* due to COVID-19. We utilize longitudinal archival data and use discontinuous growth modeling (DGM) to examine these patterns of job performance trajectories (Bliese & Lang, 2016). Our work makes two major contributions. First, we extend the performance literature to understand the effects of macro events like COVID-19 on employee job performance (Campbell & Wiernik, 2015; Carpini et al., 2017), which has been largely overlooked in prior research (for reviews, see Carpini et al., 2017; Kniffin et al., 2021). Moreover, we respond to the call from scholars (Carpini et al., 2017) to enhance the understanding of job performance in relation to time, a literature that is still in its infancy. Second, we expand the performance literature and EST by examining the moderating role of status on the performance trajectories caused by the COVID-19 event. In doing so, we also advance the status literature by examining whether status stemming from different sources such as society, occupation, and workplace have different impacts, and providing a more nuanced theoretical explanation to the role of status in the dynamic trajectories of employee job performance.

1. Theory and hypotheses

1.1. COVID-19 and EST

COVID-19 has had global adverse economic consequences for employees and firms such as declining economic growth and increased unemployment rates (for reviews, see Adamowicz, 2022; Cortes & Forsythe, 2023). The adverse economic impact of COVID-19 highlights the need to fully utilize the human capital of employees during such difficult period which requires high employee job performance (Campbell & Wiernik, 2015). However, it may be difficult for employees to focus on job tasks as COVID-19 is a novel, disruptive, and critical exogenous event with a significant impact on the daily personal and work life of employees (Akkermans et al., 2020; Kniffin et al., 2021). To expand our understanding of the impact of COVID-19 from an EST perspective, we examine the way employee job performance changes over time due to such event.

EST posits that discrete, discontinuous events bounded in time and space, "which diverge from the stable or routine features of the organizational environment" (Morgeson et al., 2015, p. 519), have significant impacts in the workplace. According to EST, "the hierarchical level at which an event occurs" functions to determine event strength and its corresponding influences (Morgeson et al., 2015, p. 525). That is, the higher the level of the event (i.e., if the event is of a global order rather than locally bound), the greater and more enduring the impacts of this event. EST theory predicts that the onset of such event results in a discontinuous immediate impact on both firms and individuals; as the event evolves from onset to postonset, the impact of such event can result in another distinct enduring effect (Bliese et al., 2017; Morgeson et al., 2015). To test the predictions of EST at onset and postonset periods, it is crucial to obtain sufficient data *before* and *after* the onset of the event (Bliese et al., 2017; Bliese & Lang, 2016). We thus utilize unique archival data that measures employee job performance before, during, and after the initial outbreak of the COVID-19 pandemic in China for an extended period and utilize EST as a guiding theoretical framework to examine the impact of the COVID-19 pandemic (Lin et al., 2021; Liu et al., 2021; McFarland et al., 2020; Min et al., 2021) on employee job performance trajectories over time.

COVID-19 presents a unique opportunity to test EST, as it is one of the few global events that affect all countries, and it is high in novelty, disruption, and criticality in comparison to many other exogenous events (Liu et al., 2021; McFarland et al., 2020; Min et al., 2021; Roulet & Bothello, 2022). COVID-19 is a novel event as the vast majority of the current generation has never before witnessed a widespread pandemic, bringing about unanticipated, nonroutine, and uncommon reactions. For instance, in response to COVID-19,

employees may encounter increased anxiety and emotional suppression (Hu et al., 2020; Trougakos et al., 2020), hence affecting their behaviors at work. COVID-19 is also a disruptive event because it alters existing routines and requires whole nations, organizations, and employees to take anti-epidemic measures (e.g., wearing masks and keeping social distance) and change lifestyles (e.g., work from home or live in the factory) to adapt to the new situation. Finally, COVID-19 is a critical event since it can threaten the lives and health of any individual, thereby forcing employees to allocate resources to protect not only their health and safety but also the health of their family members. For instance, employees respond to COVID-19 by first prioritizing the mitigation of the potential adverse effects of COVID-19 (Prime et al., 2020), resulting in attentional resources being transferred away from routine work tasks to more pressing tasks associated with such event. As a result, COVID-19 is an ideal event defined in EST (Lin et al., 2021; Liu et al., 2021; McFarland et al., 2020; Min et al., 2021; Roulet & Bothello, 2022; Shoss et al., 2021), with important implications for employee job performance over time.

1.2. COVID-19 and employee job performance trajectories

Given the strength of COVID-19 as an event defined by EST, we propose that employee job performance would undergo a significant decrease after the onset of COVID-19. Events originating from a higher level and having higher strength (i.e., higher novelty, disruption, and criticality) are more likely to produce immediate impacts on individuals (Morgeson et al., 2015). Specifically, we argue that the onset of COVID-19 will occupy much of the attentional resources of the employee as they focus on managing the implications of COVID-19 both within and outside the workplace. This detracts from the available attention to work tasks, resulting in a decrease in job performance immediately after the onset of COVID-19.

Employees need to devote increased attentional resources to managing such event, as COVID-19 has been found to increase the worry for the individual's own and families' health (Prime et al., 2020) as well as to increase anxiety (Hillebrandt & Barclay, 2022; Hu et al., 2020) and emotional suppression (Trougakos et al., 2020). To respond to the increasing stress from COVID-19 (Anicich et al., 2020), employees may prioritize the management of their basic needs (e.g., health and welling-being). Due to limited attentional resources (De Martino et al., 2008), individuals focus their attention on managing such basic psychological needs which distract their attention away from regular workplace tasks. For instance, individuals may spend more time trying to follow the public health guidelines to prevent the spread of COVID-19 such as increased cleaning and disinfection as well as limiting their trips outside of the house. As higher demands are placed on the attentional resources of the employee, due to the lack of essential supplies during the initial onset of COVID-19, employees need to spend more energy on trying to purchase limited disinfecting supplies and stock emergency grocery items. As a result, employees have fewer attentional resources to place on work tasks, resulting in a decline in job performance. Additionally, in the context of our study in China during the initial onset of COVID-19, kindergartens, schools, nursing homes, and household services were closed. Thus, employees had to focus their attentional resources on taking care of their children and other dependents in their family, including completing all the housework. Such focus may limit the attentional resources available to devote to work tasks.

The demands for the attentional resources of the employee also increase in the workplace during this event. Employees need to allocate attentional resources to learn, understand and comply with new workplace policies associated with COVID-19. Such policies take up time and are mandatory, but do not enhance their job performance. At the onset of COVID-19, organizations mandate various policies and operational changes that generate additional work for employees (Chong et al., 2020). For instance, employees are not allowed to congregate with others; workers must wear masks and wash hands when entering or leaving the factory; employees need to check and report temperatures every day; employees need to attend numerous additional meetings to discuss new COVID-19 regulations. Such changes divert the attentional resources of employees towards complying with new health and safety measures, but leave fewer attentional resources for work tasks that can enhance job performance. Hence:

Hypothesis 1. (H1): The onset of COVID-19 decreases employee job performance relative to the preonset period.

EST also suggests that the impact of the event is not static, but is dynamic because it depends on how the event strength changes over time (Morgeson et al., 2015). In particular, the strength of the event is likely to gradually decrease as individuals adjust to the new normal around COVID-19 (Anicich et al., 2020; Roulet & Bothello, 2022). That is, while the onset of the event may have a large initial impact, such impact may gradually dissipate as employees adjust to the institutionalized routines to manage such event (Morgeson et al., 2015). Consistent with such theoretical predictions, we propose that the decrease in job performance will dissipate over time (i.e., job performance will gradually increase) during the postonset period of COVID-19.

Specifically, with increasing knowledge of COVID-19 over time, employees may become more confident in how to protect themselves from COVID-19 and therefore can focus more on work tasks. The theory of habituation (Thompson & Spencer, 1966) suggests that individuals undergo a psychological learning process in which the response to a stimulus decreases after repeated exposure. As employees become more accustomed to the new circumstances brought about by COVID-19, they learn how to manage the pandemic and can focus on their work tasks, resulting in a gradual increase in job performance. Indeed, at the onset of the pandemic, knowledge of how to protect themselves from the pandemic was extremely limited, especially in China where COVID-19 was first encountered. As employees and firms start to gain more knowledge about COVID-19, employees become more comfortable with managing the pandemic, therefore gradually decreasing the attentional resources devoted to such pandemic and allowing for attention to be reverted to job performance. Thus, during the postonset period, as employees increasingly become accustomed to COVID-19, they are able to devote more attention to their job to perform better than that in the onset period. Hence, the event strength of COVID-19 begins to gradually dissipate as employees adjust to the new normal of living and working amidst COVID-19.

As China returns to life after the initial wave of the pandemic (i.e., schools begin to reopen), employees are able to divert their

resources from taking care of their families to workplace activities. Relatedly, as safety measures become institutionalized into society, the steps to manage COVID-19 are incorporated into daily life. Employees become routinized to follow COVID-19 safety measures and no longer have to devote their limited attention to focus on such tasks. For instance, after the onset of COVID-19, governments institutionalize safety prevention measures (i.e., wearing a mask) to manage COVID-19, and individuals in society start to adjust their behavior to such measures, resulting in an automated response as part of a new normal in living with COVID-19. Such adaptation attenuates the novelty, disruption, and criticality of COVID-19 and the automatic routines in response to COVID-19 enable employees to increase their attention to their job, resulting in a gradual increase in job performance.

Within the workplace, as employees become more familiar with the changes at work stemming from COVID-19 (Anicich et al., 2020), they also begin to incorporate the new safety measures for COVID-19 into their routines at work and are able to devote more resources towards work tasks that increase job performance. This helps facilitate an increase in attention that employees devote to their job, thereby resulting in a gradual increase in job performance over time. For instance, in the postonset period of COVID-19, employees learn to wash their hands, clean their desks and not eat in large crowds as part of new workplace rules to manage COVID-19. As such safety tasks become a part of the routine of the employee, less attention is needed to be devoted to learning, remembering, and complying with such tasks within the workplace, resulting in more attention that can be devoted to work-related tasks that increase job performance. Hence:

Hypothesis 2. (H2): Employee job performance increases over time during the postonset period of COVID-19.

1.3. The moderating role of different sources of status

EST further posits that the resources of an individual can play a critical role in the impact of such events (Morgeson et al., 2015). Status is a valuable resource that affects survival and success in both society and the work domain (Waldron, 1998), with individuals deriving their status from different sources (Piazza & Castellucci, 2013). We provide a finer-grained understanding of different sources of status and examine the moderating effect of such sources of status on employees' job performance trajectories due to COVID-19. Specifically, we investigate whether *socioeconomic status* (*SES*) which is defined as the individual's relative social or economic position (Christie & Barling, 2009), *occupational stigma* which captures the individual's perception of status stemming from the occupation (Schaubroeck et al., 2018) and *workplace status* which refers to an employee's relative standing within the organization (Djurdjevic et al., 2017) may influence the job performance trajectories due to COVID-19. Drawing from EST, which posits that an event such as COVID-19 requires increased attention and resources from individuals to manage the situation (Morgeson et al., 2015), we propose that status stemming from society, occupation, and the workplace can provide valuable resources to help the employee better manage COVID-19. That is, higher status from such sources weakens the detrimental effects of COVID-19 onset on job performance.

Specifically, SES is the objective social or economic position based on resources and prestige (Wanberg et al., 2020). Higher SES individuals possess more tangible (e.g., income) and intangible (e.g., social support) resources (Gallo et al., 2005), which can help the employee manage the adverse effects of COVID-19 and therefore have more resources and attention to devote to work tasks. For instance, employees higher in SES may have more access to pandemic prevention supplies easing their concerns over their health and well-being; such employees may have more means to take care of their family during the pandemic; and they may also be less concerned with the possibility of job loss or pay cuts stemming from COVID-19 because they have more possessions to deal with these changes and uncertainties. With the ability to draw on resources from higher SES to take care of their basic needs, these employees are more likely to focus their attention on job tasks at the onset of COVID-19. By contrast, employees with lower SES would encounter a scarcity of personal economic and intangible resources, which results in enhanced concerns about their own and their family members' health and well-being, more worries about the financial situation, and a greater sense of powerlessness in perceived and actual control over life (Kraus et al., 2012). Such worries and sources of stress divert employees' attention and resources from work tasks, thereby further exacerbating the job performance decrease due to COVID-19.

Occupational status captures the employee's perception of the relative standing of their occupation (Ashforth & Kreiner, 1999). Higher occupational status suggests that employees perceive that their occupation is of relatively higher standing due to greater perceptions of respect and prestige; while lower occupational status indicates that employees view their occupation as degrading or demeaning due to the negative physical, moral, or social implications associated with the occupation (Ashforth & Kreiner, 1999; Kish-Gephart et al., 2023; Maloney, 2022; Schaubroeck et al., 2018; Weiss et al., 2022). Higher occupational status can function to enrich psychological resources (e.g., occupational esteem and self-esteem; Ashforth et al., 2007), which can help employees draw on these resources during the onset of COVID-19 to meet the challenges of learning and managing extra tasks stemming from COVID-19 that have been implemented in the workplace. For instance, employees with higher occupational status may have a higher sense of meaningfulness and worthiness stemming from their occupation (Dobrow Riza & Heller, 2015), which enables the employee to adapt to the changes in the workplace associated with COVID-19, thereby weakening the initial decrease in job performance due to COVID-19. The meaningfulness stemming from the occupation may drive employees to desire to adapt to the changes in the workplace and be able to try to find ways in which their occupation can add value to the organization, despite all the non-routine changes in health and safety measures in the organization. In comparison, when occupational status is lower, the attachment between employees and the occupation is more easily broken, particularly during the experience of an external crisis such as COVID-19. As issues of health and even life are considered, such employees may be more likely to devote their limited resources to activities that are meaningful and important to them. They may not be committed to devoting their energy and involvement to their occupation or their job (Ashforth & Kreiner, 1999). Thus, employees perceiving lower occupational status are more likely to experience a job performance decrease at the onset of COVID-19.

Workplace status refers to an employee's relative standing in terms of respect, prominence, and prestige in the organization (Djurdjevic et al., 2017). Such status is a socially constructed subjective assessment based on coworkers' collective beliefs concerning the respect, prominence, and prestige of the individual. Therefore, workplace status derives not only from the position of the employee, but also from valued attributes and competence demonstrated by the employee (Anderson & Kilduff, 2009). Employees with higher workplace status have more access to interpersonal support from other coworkers (Anderson & Kilduff, 2009; van der Vegt et al., 2006). Employees with higher workplace status can draw on social support to alleviate many concerns about COVID-19, helping them to focus on work tasks, resulting in a weakening of the job performance decrease due to the COVID-19 onset. Indeed, studies have found that individuals with higher workplace status tend to wield more interpersonal influence, higher performance, more OCBs (Carnevale et al., 2022), more fair treatment (Djurdjevic et al., 2017; Erdogan et al., 2001; Fiddick & Cummins, 2001), and higher job satisfaction (Djurdjevic et al., 2017). Conversely, employees with lower workplace status may have reduced resources due to a lack of coworkers' respect, prominence, and prestige. Thus, at the onset of COVID-19, such employees may receive less help from colleagues due to their lower workplace status, which impairs how they perform at work.Taken together, employees with higher SES, higher occupational status (i.e., lower occupational stigma), or higher workplace status may better manage the shocks and uncertainties at the onset of COVID-19 and focus on their work tasks. Hence:

Hypothesis 3. (H3): Higher societal (*H3a*), occupational (*H3b*), and workplace status (*H3c*) weakens the decrease in job performance during the onset of COVID-19.

During the postonset period, we propose that the positive job performance trajectory is strengthened for employees with lower status stemming from society, occupation, and the workplace. As noted above, employees with lower status are more likely to be negatively affected by the onset of COVID-19, resulting in a greater decline in job performance. Extending such logic, since resource gains become more important when resource loss circumstances are high (Hobfoll et al., 2018), the recovery during the postonset period may be associated with greater resource gains for lower-status employees, which helps strengthen the positive job performance trajectory during the postonset period. Moreover, during the postonset period, the event strength of COVID-19 declines due to an institutionalization and understanding of effective policies to manage COVID-19. With such decrease in event strength, employees may refocus their efforts on recovering income in their job, in particular for lower status employees. Employees with lower status may be more motivated to earn more money to buffer or aid their losses due to COVID-19 and hence exhibit greater effort towards higher performance during the postonset period of COVID-19. Specifically, lower SES employees experience more financial loss and greater health concerns during the onset of COVID-19, which motivates them to increase job performance to make up for such loss during the postonset period. Employees with lower occupational status may face increased attention distraction due to managing job and income insecurity concerns at the onset of the pandemic, but during the postonset period, these concerns may not be so salient, and therefore such employees have more attention to devote towards higher job performance. Similarly, employees with lower workplace status may face pressures during the onset period because they have less support from coworkers to help them manage the pandemic (van der Vegt et al., 2006). However, as the firm is able to establish health and safety policies to help employees manage COVID-19 during the postonset period, employees with lower workplace status no longer have to rely on the (lack of) coworker support and thereby be able to focus more on work tasks to achieve higher job performance. Hence:

Hypothesis 4. (H4): Lower societal (*H4a*), occupational (*H4b*), and workplace status (*H4c*) strengthens the positive job performance trajectory during COVID-19 postonset.

2. Method

2.1. Sample and procedures

We utilize the setting in China to test our hypotheses because COVID-19 was first experienced in China and at that time, both firms and employees were not able to draw on the experiences of other countries to deal with this pandemic. Hence, this provides an ideal context to test the novel effects of COVID-19. Moreover, this initial wave of COVID-19 was also critical and disruptive as COVID-19 initially had a strong negative impact on the Chinese economy, but experienced a significant rebound stemming from the control of the pandemic (Zhang & Zheng, 2021), following a 'V-shaped' pattern (Ambrocio, 2020). However, to ensure that such V-shaped demand conditions did not drive our results, we chose to conduct our study in a firm where job performance ratings were well-documented and largely determined by the effort that the employee put into the job (and not by demand conditions or the nature of the job). Based on these criteria, we collected data from a manufacturing company that produced components of a Lithium battery located in Southern China with the full support of the top management team due to their interest in understanding the factors related to employee job performance.

In December 2019 (before the initial onset of COVID-19), the Human Resource (HR) department sent the prepared electronic questionnaires to invite all full-time frontline employees in the company to voluntarily participate in our study. The large majority of employees worked in the production department which produced or assembled components of Lithium batteries. A small minority worked in jobs within functional departments such as accounting, audit, HR, cost-control, purchasing, and sales. On the first page of the survey, we assured all participants of the confidentiality of their responses and expressed our sincere gratitude for their support. A total of 708 employees responded by rating their SES, occupational stigma, and workplace status.

Then, at the onset of the COVID-19 pandemic, this company like many other organizations had limited knowledge and resources (i.e., safety supplies such as hand sanitizer and disinfectant) to manage the interruptions caused by COVID-19. However, this company

gradually implemented public health guidelines and required all employees to keep social distance, wear masks, wash hands, and check body temperature regularly while working. During this time, the company and its employees faced tremendous changes and disruptions in daily work and life because of COVID-19, which inspired the top management team and us to examine the influences of the COVID-19 pandemic on employee job performance.

We obtained the permission of all participants to access their monthly employee job performance records and demographic information such as age, tenure, education, and gender from the company's HR archival records. We obtained monthly employee job performance records starting from January 2019 and ending in September 2020. The starting point was chosen based on the comparability rule (i.e., one year before the onset of COVID-19), as the onset of COVID-19 was in January 2020. These 21 consecutive months of employee job performance archival data allowed us to test our research question by dividing the data into the preonset (from January 2019 to December 2019), onset (January 2020 to February 2020), and postonset (from February 2020 to September 2020) periods. Capturing archival data for 12 months as part of the preonset period can also help examine whether employee job performance changes cyclically, thus ruling out the potential influences of macro-cyclical factors other than COVID-19.

After matching the survey responses with the employee job performance archival data using the unique identification code assigned to each employee, we arrived at a final sample of 708 employees over 21 months – resulting in a total of 10,808 observations after excluding missing performance values. In our sample, 43 % were female with an average age of 31.40 years old (standard deviation [*SD*] = 6.98), and 65 % had at least a high school education with an average organizational tenure of 3.84 years (*SD* = 3.36).

2.2. Measures

As the native language of all our participants was Chinese, we utilized existing scales that have previously been used for Chinese samples, and where needed, we followed the standard translation and back-translation procedures for all the items in our survey (Brislin, 1986). Unless otherwise noted, measures utilized a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

SES was assessed with a one-item scale developed by Adler et al. (2000) and previously used in Chinese samples (e.g., Huang et al., 2017; Rarick et al., 2018). We asked participants to evaluate where they would place their family on the following scale: "At the top of the ladder (9) are the households and families who are the best off, those who have the most money, the most education, and the most respected jobs. At the bottom (1) are the families who are the worst off, who have the least money, the least education, and the least respected jobs or no job. The higher you and your family are on this scale, the closer you are to the people at the very top, and the lower you and your family are, the closer you are to the people at the very bottom."

Occupational stigma was assessed with a 5-item scale from Schaubroeck et al. (2018), which was originally adapted from a scale in Chinese (Lai et al., 2010). A sample item was "Few people would be proud to have my job" (Cronbach's alpha [α] = 0.84).

Workplace status was assessed with a 5-item scale developed by Djurdjevic et al. (2017) using Chinese employees as samples and utilized by other research in the Chinese context (e.g., Liu et al., 2020). A sample item was "I have a great deal of prestige in this company" (α = 0.91).

Archival job performance was provided by the HR department. Every month, the direct leader rated the job performance of each employee. The performance rating standards were established according to the work contents and requirements of each job position and are intended to capture the extent of effort to which employees devoted to their required tasks within that month. In this way, the performance score is comparable across different positions and jobs. For most employees, the performance ratings range from 0 with very poor performance to 100 with very good performance. However, leaders were also encouraged to motivate employees by providing ratings above 100 for certain exceptional performance. Consequently, the company did not set an explicit upper limit (In our sample, the range was from 0 to 190).

It is important to note that as part of our research design, we ensured that the performance rating standards did not change during the period of our study, despite the onset of COVID-19. That is, leader-rating standards of employee job performance remained the same despite the decrease in demand for the firm's products due to COVID-19, thereby capturing the behavioral effort each employee devoted to work tasks. In other words, even though the company shut down for several days at the end of January 2020 and operated reduced hours due to COVID-19 and the Spring Festival holiday in China, the ratings given by leaders are not based on hours worked or the amount of output produced (which depends on demand conditions), but on the quality of the tasks completed by employees. Therefore, the performance score is not affected by the decrease in demand due to COVID-19. In addition, if employees were not required to go to work due to a lack of demand (i.e., a stoppage in production), the performance score for this month is marked in the archival records as not applicable and is not included in our analysis. Hence, the archival performance measure in our study reflects each employee's behavioral efforts and devotion to work tasks in the given month.

Control variables. We controlled for employee demographics including age, tenure, education, and gender, as these may influence job performance (Hassan & Ogunkoya, 2004) and have been controlled for in previous performance studies (e.g., Farh et al., 2012). The results remained consistent without the inclusion of these control variables.

2.3. Analytical strategy

Given the longitudinal data structure and the advantage of having a large set of preonset baseline data and postonset recovery data, we used discontinuous growth modeling (Bliese et al., 2017; Bliese & Lang, 2016) to test the hypothesized discontinuous trajectories of employee job performance due to COVID-19 pandemic. DGMs are "a specific form of multilevel mixed-effects models that use multiple time variables to model transition processes over time and individual differences in transition processes" (Lang & Bliese, 2009, p. 414). DGMs are used to examine discontinuous trends from discontinuous events (Bliese & Lang, 2016; McFarland et al., 2020). As a result,

this approach is well suited to test the discontinuous employee job performance trajectories due to COVID-19. We followed the approach utilized by Bliese and colleagues (Bliese et al., 2017; Bliese & Lang, 2016; Bliese & Ployhart, 2002) to test whether the COVID-19 onset and postonset slopes for employee job performance differ relative to the preonset slope, and examine the moderation effects of different sources of status on such trajectories. This method is similar to regression discontinuity design in economics, a method that attempts to arrive at causal inferences (Imbens & Lemieux, 2008).

Using DGM, we test the within-employee change in monthly job performance over time at Level 1 and estimate the effects of between-employee predictors (i.e., moderators) at Level 2. Specifically, to test Hypotheses 1 and 2, we regress the dependent variable (i.e., employee job performance) onto a set of growth terms (preonset, onset, and postonset), defined and displayed in Table 1. Equation (1) presents the basic DGM Level 1 model and Eq. (2) provides the between-person random intercepts with corresponding random slopes during the preonset (Eq. (3)), onset (Eq. (4)), and postonset periods (Eq. (5)). Hypothesis 1 is supported by a significant onset term; Hypothesis 2 is supported by a significant postonset term.

$$\text{Level 1}: Y_{ti} = b_{0i} + b_{1i}Preonset_{ti} + b_{2i}Onset_{ti} + b_{3i}Postonset_{ti} + e_{ti} \quad (1)$$

$$\text{Level 2}: b_{0i} = \gamma_{00} + \gamma_{01}Age_i + \gamma_{02}Tenure_i + \gamma_{03}Education_i + \gamma_{04}Gender_i + \mu_{0i} \quad (2)$$

$$b_{1i} = \gamma_{10} + \mu_{1i} \quad (3)$$

$$b_{2i} = \gamma_{20} + \mu_{2i} \quad (4)$$

$$b_{3i} = \gamma_{30} + \mu_{3i} \quad (5)$$

To test our moderation effects, we added SES, occupational stigma (OS), and workplace status (WS) separately and simultaneously (as a robustness check) as a Level 2 predictor (Eq. (6)). For brevity and completeness, we display full equations in robustness checks where we added SES, OS, and WS as predictors of employee job performance during preonset (Eq. (7)), onset (Eq. (8)), and postonset (Eq. (9)). The interaction between different status (SES, OS, and WS) with onset and postonset provide tests of Hypotheses 3 and 4.

$$\text{Level 1}: Y_{ti} = b_{0i} + b_{1i}Preonset_{ti} + b_{2i}Onset_{ti} + b_{3i}Postonset_{ti} + e_{ti} \quad (1)$$

$$\text{Level 2}: b_{0i} = \gamma_{00} + \gamma_{01}Age_i + \gamma_{02}Tenure_i + \gamma_{03}Education_i + \gamma_{04}Gender_i + \gamma_{05}\,SES_i + \gamma_{06}\,OS_i + \gamma_{07}\,WS_{i+}\,\mu_{0i} \quad (6)$$

$$b_{1i} = \gamma_{10} + \gamma_{11}\,SES_i + \gamma_{12}\,OS_i + \gamma_{13}\,WS_{i+}\mu_{1i} \quad (7)$$

$$b_{2i} = \gamma_{20} + \gamma_{21}\,SES_i + \gamma_{22}\,OS_i + \gamma_{23}\,WS_{i+}\,\mu_{2i} \quad (8)$$

$$b_{3i} = \gamma_{30} + \gamma_{31}\,SES_i + \gamma_{32}\,OS_i + \gamma_{33}\,WS_{i+}\,\mu_{3i} \quad (9)$$

We utilize Stata 14 to run a multilevel mixed-effects linear regression with restricted maximum likelihood. The syntax for our hypothesis tests is provided in Appendix A.

Table 1
The discontinuous growth model terms.

Time period	Month Year	Preonset	Onset	Postonset
Preonset	January 2019	0	0	0
	February 2019	1	0	0
	March 2019	2	0	0
	April 2019	3	0	0
	May 2019	4	0	0
	June 2019	5	0	0
	July 2019	6	0	0
	August 2019	7	0	0
	September 2019	8	0	0
	October 2019	9	0	0
	November 2019	10	0	0
	December 2019	11	0	0
Onset	January 2020	12	0	0
Postonset	February 2020	13	1	0
	March 2020	14	1	1
	April 2020	15	1	2
	May 2020	16	1	3
	June 2020	17	1	4
	July 2020	18	1	5
	August 2020	19	1	6
	September 2020	20	1	7

Note. The month of January 2020 was when the COVID-19 pandemic onset happened (The lockdown of Wuhan city in China was on January 23, 2020).

3. Results

3.1. Descriptive statistics and confirmatory factor analysis

Table 2 displays the means, standard deviation, correlations, and measure reliabilities.

We conducted confirmatory factor analyses to assess the discriminant validity of the focal survey variables, including SES, occupational stigma, and workplace status. The hypothesized three-factor model showed acceptable fit to the data ($\chi^2(44) = 322.41$, $p < .001$; CFI = 0.94, TLI = 0.92, RMSEA = 0.09) and was superior to alternative models: The two-factor model that combined SES and workplace status ($\chi^2(45) = 554.33$, $p < .001$; CFI = 0.88, TLI = 0.86, RMSEA = 0.13; $\Delta\chi^2(1) = 231.92$, $p < .001$); the two-factor model that combined SES and occupational stigma ($\chi^2(45) = 329.13$, $p < .001$; CFI = 0.94, TLI = 0.92, RMSEA = 0.09; $\Delta\chi^2(1) = 6.72$, $p < .01$); and the two-factor model that combined occupational stigma and workplace status ($\chi^2(45) = 2099.69$, $p < .001$; CFI = 0.53, TLI = 0.43, RMSEA = 0.25; $\Delta\chi^2(1) = 1777.28$, $p < .001$). Thus, the focal survey variables were distinct.

3.2. Hypotheses testing

Hypothesis 1 predicts a decrease in employee job performance during the onset period (relative to the preonset period). The result of the unconditional model (Model 1, Table 3) shows a significant decrease in performance at the onset of COVID-19 (Onset, $\gamma = -15.87$, $p < .001$), providing support for H1. In particular, the average employee job performance in Month 1 (January 2019) was 94.87 (i.e., intercept). At the onset of COVID-19, the average employee job performance decreased by 15.87 relative to preonset levels.

Hypothesis 2 predicts an increase in job performance during the postonset period (relative to the onset period). The result of the unconditional model (Model 1, Table 3) shows a significant change in performance during the postonset period (postonset, $\gamma = 2.37$, $p < .001$), thus providing support for H2. In the postonset period, the average change in performance was 2.37. Moreover, the variance component for the COVID-19 postonest period was 14.54 and significant ($p < .001$), suggesting there were within-person differences during such period. Thus, our results show that the pandemic onset led to a large job performance decrease, while the postonset period witnessed a gradual job performance recovery (i.e., increase).

Hypothesis 3 predicts that relative to the preonset period, employees with higher SES (*H3a*), lower occupation stigma (*H3b*), and higher workplace status (*H3c*) experience less of a decrease in job performance during the onset of COVID-19. Model 2 in Table 3 shows a non-significant interaction between onset and SES ($\gamma = 0.05$, *n.s.*), thus not supporting H3a. Model 3 in Table 3 shows a significant interaction between onset and occupational stigma ($\gamma = -3.63$, $p < .001$), providing support for H3b. That is, employees with lower occupational stigma have less of a decrease in job performance compared to employees with higher occupational stigma. Similarly, Model 4 in Table 3 shows a significant interaction between onset and workplace status ($\gamma = 1.60$, $p < .05$), providing support for H3c. That is, employees with higher workplace status have less of a decrease in job performance than employees with lower workplace status. As a robustness check, we included all the interaction terms simultaneously and the results displayed in Model 5 of Table 3 remained consistent.

H4 predicts that relative to the preonset period, employees with lower SES (H4a), higher occupation stigma (H4b), and lower workplace status (H4c) experience a greater increase in job performance during the postonset of COVID-19. Model 2 in Table 3 displays a non-significant interaction between postonset and SES ($\gamma = 0.01$, *n.s.*), thus not providing support for H4a. Model 3 in Table 3 shows a significant interaction between postonset and occupational stigma ($\gamma = 0.90$, $p < .001$), thus providing support for H4b. That is, employees with higher occupational stigma have a greater increase in job performance than employees with lower occupational stigma. Model 4 in Table 3 shows a non-significant interaction between postonset and workplace status ($\gamma = -0.21$, *n.s.*), therefore not providing support for H4c. Figs. 1 and 2 illustrate the moderation effects of occupational stigma and workplace status on the

Table 2
Means, standard deviations, and correlations.

Variables	Mean	SD	1	2	3	4	5	6	7	8
1. Age	31.40	6.98	–	0.56***	−0.13***	−0.12**	0.07	−0.06	0.14***	0.21***
2. Tenure	3.84	3.36	0.55***	–	−0.12**	−0.06	0.01	−0.10**	0.10**	0.18***
3. Education	2.03	0.98	−0.09***	−0.11***	–	0.21***	0.03	−0.13***	0.02	0.07
4. Gender	0.57	0.49	−0.11***	−0.05***	0.16***	–	−0.15***	0.16***	0.10**	−0.23***
5. Socioeconomic status (SES)	3.85	1.86	0.06***	−0.01	0.03***	−0.17***	–	−0.11**	0.25***	0.03
6. Occupational stigma (OS)	3.10	1.15	−0.06***	−0.10***	−0.15***	0.13***	−0.10***	(0.84)	−0.04	−0.08
7. Workplace status (WS)	3.43	1.32	0.13***	0.09***	0.01	0.09***	0.25***	−0.04***	(0.91)	0.03
8. Job performance	91.33	17.77	0.07***	0.06***	0.04***	−0.07***	0.01	−0.03**	0.01	–

Note. $n = 10{,}808$ observations nested in 708 employees. Education: 1 = junior middle school degree, 2 = senior high school degree, 3 = junior college education degree, 4 = bachelor degree or above. Gender: 0 = female, 1 = male. Correlations below the diagonal were calculated at Level 1 (i.e., month level/within-person level) after assigning the Level 2 (i.e., employee level/between-person level) variables to each Level 1 instance. Correlations above the diagonal were calculated at Level 2 after averaging Level 1 variables and assigning the averages to each Level 2 instance. Cronbach's alphas are reported in parentheses along the diagonal.

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

Table 3
Results of discontinuous growth models of monthly employee job performance.

Variable	Model 1 (unconditional model)		Model 2 (SES interactions)		Model 3 (OS interactions)	
	Coef.(SE)	*z* 95 % CI	Coef. (SE)	*z* 95 % CI	Coef. (SE)	*z* 95 % CI
Intercept	94.87 (0.48)	197.63*** [93.93, 95.81]	94.89 (0.48)	196.81***[93.95, 95.84]	94.89(0.48)	196.86***[93.94, 95.83]
Age	0.14 (0.04)	3.57*** [0.06, 0.22]	0.14 (0.04)	3.58***[0.06, 0.22]	0.13(0.04)	3.57***[0.06, 0.22]
Tenure	0.09 (0.08)	1.18 [−0.06, 0.24]	0.09 (0.08)	1.17[−0.06, 0.24]	0.10(0.08)	1.25[−0.06, 0.25]
Education	0.62 (0.23)	2.67** [0.16, 1.07]	0.62 (0.23)	2.68**[0.17, 1.08]	0.64(0.24)	2.72**[0.18, 1.10]
Gender	−2.94 (0.46)	−6.36*** [−3.85, −2.04]	−2.97 (0.47)	−6.34***[−3.89, −2.05]	−2.98(0.47)	−6.35***[−3.89, −2.06]
Preonset	0.08 (0.05)	1.60 [−0.02, 0.17]	0.08 (0.05)	1.59[−0.02, 0.17]	0.08(0.05)	1.61[−0.02, 0.17]
Onset	−15.87 (0.96)	−16.48*** [−17.75, −13.98]	−15.87(0.96)	−16.46[−17.76, −13.98]	−15.88(0.95)	−16.78[−17.74, −14.03]
Postonset	2.37 (0.20)	11.92*** [1.98, 2.75]	2.37 (0.20)	11.90***[1.98, 2.76]	2.38(0.19)	12.20***[1.99, 2.76]
SES			0.04 (0.21)	0.19[−0.38, 0.46]		
SES × Preonset			−0.01 (0.03)	−0.50[−0.07, 0.04]		
SES × Onset			0.05 (0.52)	0.09[−0.97, 1.07]		
SES × Postonset			0.01 (0.11)	0.05[−0.20, 0.21]		
OS					0.32(0.34)	0.94[−0.35, 1.00]
OS × Preonset					−0.02(0.04)	−0.47[−0.10, 0.06]
OS × Onset					−3.63(0.80)	−4.51***[−5.21, −2.05]
OS × Postonset					0.90(0.17)	5.33***[0.57, 1.22]
WS						
WS × Preonset						
WS × Onset						
WS × Postonset						
	Coef.(SE)	95 % CI	Coef.(SE)	95 % CI	Coef.(SE)	95 % CI
Variance components						
Intercept	5.83(158.68)	[3.89E-23, 8.74E+23]	5.85(154.95)	[1.67E-22, 2.04E+23]	5.82(195.34)	[1.58E-28, 2.15E+29]
Preonset	0.00(0.00)	[4.1E-175, 1.0E+152]	0.00(0.00)	[8.2E-196, 4.2E+172]	0.00(0.00)	[1.30E-14, 5.54E-12]
Onset	341.77 (29.45)	[288.67, 404.64]	343.09 (29.54)	[289.82, 406.16]	323.29 (28.51)	[271.97, 384.28]
Postonset	14.54(1.36)	[12.11, 17.46]	14.60(1.36)	[12.17, 17.53]	13.65(1.31)	[11.31, 16.47]
Residual	217.25(3.43)	[210.63, 224.07]	217.22(3.43)	[210.61, 224.04]	217.62(3.45)	[210.97, 224.48]

Variable	Model 4 (WS interactions)		Model 5 (all interactions)	
	Coef. (SE)	*z* 95 % CI	Coef. (SE)	*z* 95 % CI
Intercept	94.89(0.48)	197.06***[93.95, 95.83]	94.93(0.49)	195.14***[93.98, 95.89]
Age	0.14(0.04)	3.50***[0.06, 0.21]	0.14(0.04)	3.50***[0.06, 0.21]
Tenure	0.09(0.08)	1.17[−0.06, 0.24]	0.09(0.08)	1.21[−0.06, 0.25]
Education	0.62(0.23)	2.67**[0.17, 1.08]	0.65(0.24)	2.74**[0.18, 1.11]
Gender	−2.97(0.47)	−6.37***[−3.88, −2.05]	−3.04(0.48)	−6.34***[−3.98, −2.10]
Preonset	0.08(0.05)	1.59[−0.02, 0.17]	0.08(0.05)	1.59[−0.02, 0.17]
Onset	−15.93(0.96)	−16.56***[−17.82, −14.05]	−15.93(0.95)	−16.83***[−17.78, −14.07]
Postonset	2.38(0.20)	11.97***[1.99, 2.77]	2.38(0.19)	12.23***[2.00, 2.77]
SES			0.03(0.22)	0.15[−0.40, 0.47]
SES × Preonset			−0.01(0.03)	−0.44[−0.07, 0.04]
SES × Onset			−0.51(0.53)	−0.96[−1.55, 0.53]
SES × Postonset			0.11(0.11)	0.99[−0.11, 0.32]
OS			0.35(0.35)	1.00[−0.33, 1.02]
OS × Preonset			−0.02(0.04)	−0.54[−0.11, 0.06]
OS × Onset			−3.64(0.81)	−4.50***[−5.22, −2.05]
OS × Postonset			0.90(0.17)	5.34***[0.57, 1.24]
WS	0.16(0.30)	0.52[−0.43, 0.74]	0.17(0.31)	0.53[0.44, 0.78]
WS × Preonset	−0.02(0.04)	−0.54[−0.09, 0.05]	−0.02(0.04)	−0.46[−0.09, 0.06]
WS × Onset	1.60(0.73)	2.20*[0.17, 3.03]	1.61(0.74)	2.18*[0.16, 3.06]
WS × Postonset	−0.21(0.15)	−1.43[−0.51, 0.08]	−0.22(0.15)	−1.43[−0.52, 0.08]
	Coef.(SE)	95 % CI	Coef.(SE)	95 % CI
Variance components				
Intercept	5.85(160.50)	[2.63E-23, 1.30E+24]	5.87(192.58)	[6.63E-28, 5.19E+28]
Preonset	0.00(0.00)	[4.0E-195, 7.6E+171]	1.57E-13(2.30E-13)	[8.81E-15, 2.78E-12]
Onset	340.40(29.36)	[287.46, 403.09]	322.65(28.48)	[271.39, 383.59]
Postonset	14.53(1.36)	[12.11, 17.45]	13.69(1.31)	[11.34, 16.52]
Residual	217.23(3.43)	[210.61, 224.05]	217.59(3.44)	[210.95, 224.45]

Note. $n = 10{,}808$ observations nested in 708 employees. Education: 1 = junior middle school degree, 2 = senior high school degree, 3 = junior college education degree, 4 = bachelor degree or above. Gender: 0 = female, 1 = male. SES = socioeconomic status. OS = occupational stigma. WS = workplace status. Age, tenure, education, SES, OS, and WS are centered.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

trajectories of employee job performance due to COVID-19. In these figures, we followed the standard in organizational research (e.g., Liu et al., 2021; Zhu et al., 2021) and used 1 *SD* above/below the mean to capture higher/lower levels of the moderator. As a robustness check, we also ran our model by including all the interaction terms in the same regression. The results shown in Model 5 of Table 3 remained consistent.

3.3. Supplementary analyses

We conducted supplementary analyses to evaluate the robustness of our findings and to rule out alternative explanations. First, it is possible that the reduction in demand for the firm's products due to COVID-19 is causing the initial decrease in job performance. While we chose an organization where performance ratings are independent of demand for the firm's products, leaders may rate the performance standards of employees lower during COVID-19 due to a lack of demand for such products. To test this possibility, we included the monthly hours worked by all employees in the firm as a time-varying predictor in the DGMs along with the existing predictors in our model. Indeed, during the onset of COVID-19, the firm total work hours in January 2020 (= 146,770.7 h) decreased dramatically compared to January 2019 (= 281,525.4 h); after the occurrence of COVID-19, the firm total work hours in February 2020 (= 44,359.8 h) and March 2020 (= 214,210.3 h) also decreased compared to February 2019 (= 149,213.5 h) and March 2019 (= 320,992.6 h) until April 2020 (= 315,093.7 h versus 309,518.9 h in April 2019). However, when monthly firm total work hours were controlled for, the result of the unconditional model still shows a significant decrease in job performance at the onset of COVID-19 (Onset, $\gamma = -10.74$, $p < .001$), suggesting employee-level job performance was not affected by the firm reduction in demand due to COVID-19.

Second, because employees were nested in different departments, it is possible that different departments may influence job performance trajectories. Thus, we further tested the impact of COVID-19 on the employee job performance trajectory after controlling for the department. The results still showed a significant decrease in performance at the onset of COVID-19 (Onset, $\gamma = -15.81$, $p < .001$) and a significant increase in performance during the postonset period (postonset, $\gamma = 2.39$, $p < .001$) indicating that our findings are not influenced by possible different performance criteria in different departments.

Finally, it is possible that job performance decreased due to cyclical factors (e.g., the Spring Festival holiday). To rule out this explanation, we compared the 2019 job performance data. Figs. 1 and 2 revealed that job performance was relatively steady and the pattern was different from January 2019 to September 2019 compared to the periods affected by COVID-19 (January 2020 to September 2020). Hence, it suggest that our results are not driven by a cyclical effect, and provides evidence for the impact of COVID-19 on job performance trajectories.

4. Discussion

Our study uses EST to explain the impact of COVID-19 on employee job performance trajectories and explore the moderating effects of different types of status. Specifically, by combining survey responses with 21 consecutive months of archival performance data, we found that COVID-19's onset led to a decrease in job performance, and such decrease was weakened for employees with lower occupational stigma and higher workplace status; whereas there was a positive job performance trajectory during the postonset period with such trajectory strengthened for employees with higher occupational stigma.

4.1. Theoretical implications

First, we build on the vast literature that has identified various factors such as the characteristics of individual, team, job, and organization that drive employee job performance (for reviews, see Carpini et al., 2017; Dalal et al., 2020) by examining the impact of a macro event in the form of COVID-19 on job performance. While emerging studies have examined changes in work practices due to COVID-19 (e.g., work from home, virtual teamwork, and virtual leadership and management) on employee workplace outcomes, the existing literature has yet to focus on the direct impact of COVID-19 on employee job performance trajectories (for a review, see Kniffin et al., 2021). In particular, by using a longitudinal and discontinuous growth model approach to understand the impact of COVID-19 (McFarland et al., 2020), we examine whether an exogenous shock results in different job performance trajectories during the onset and postonset periods (Carpini et al., 2017). Specifically, our research uncovers the magnitude of the effects of COVID-19 onset and its negative implications for job performance in the workplace. In doing so, we extend the job performance literature by explicating the effects of a single event (COVID-19) on within-person performance changes (e.g., Dalal et al., 2014; Fisher & Noble, 2004; Sonnentag & Frese, 2012) in a discontinuous manner based on an EST perspective.

Second, we enrich EST by examining the moderating effects of different sources of status. Our study shows that both occupation and workplace status function to weaken the performance decrease from COVID-19 onset. Specifically, our results align with research on occupational stigma (Schaubroeck et al., 2018) and workplace status (Djurdjevic et al., 2017) that highlights its role in influencing employees' behaviors in the work domain. Moreover, our finding that employees with higher occupational stigma exhibit a larger increase in job performance during the postonset period, complements the occupational status literature (Ashforth et al., 2007; Schaubroeck et al., 2018) which finds that occupational stigma leads to occupational disidentification and results in employee withdrawal behavior and job change intention. That is, our study finds that upon recovery from extreme events such as during the

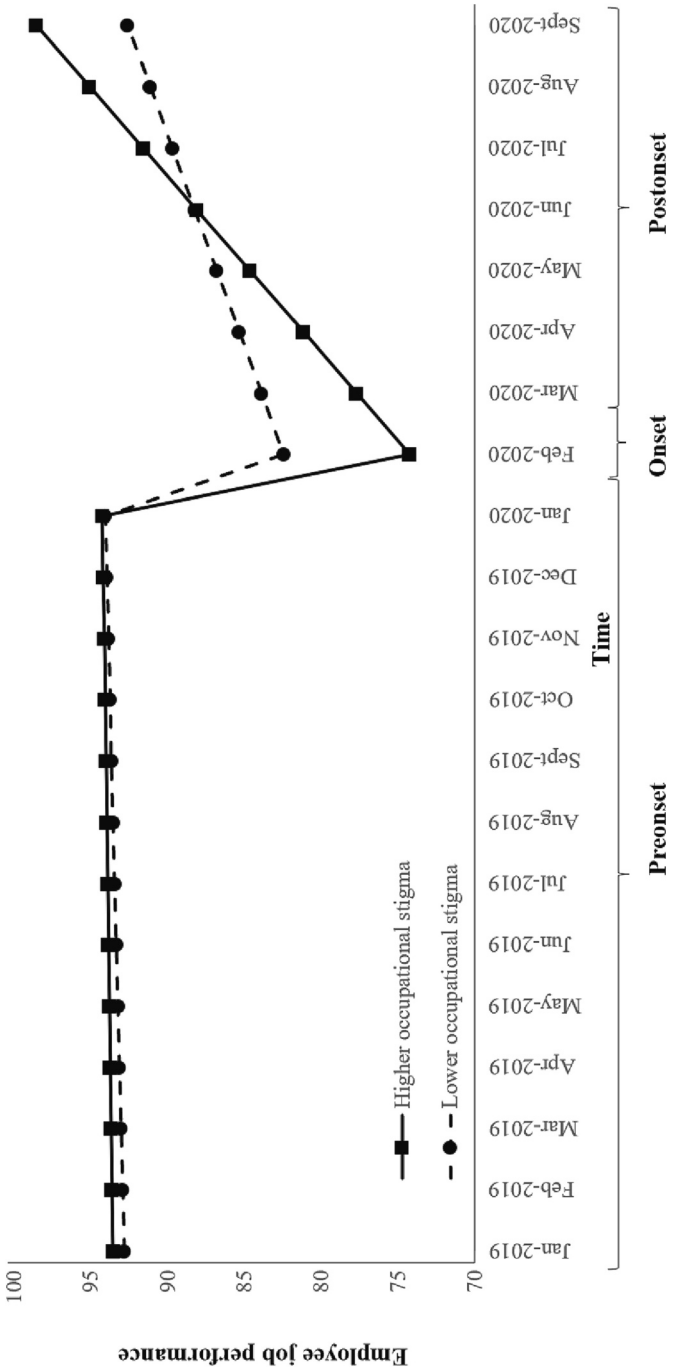

Fig. 1. Employee job performance over time for employees with higher/lower levels of occupational stigma.

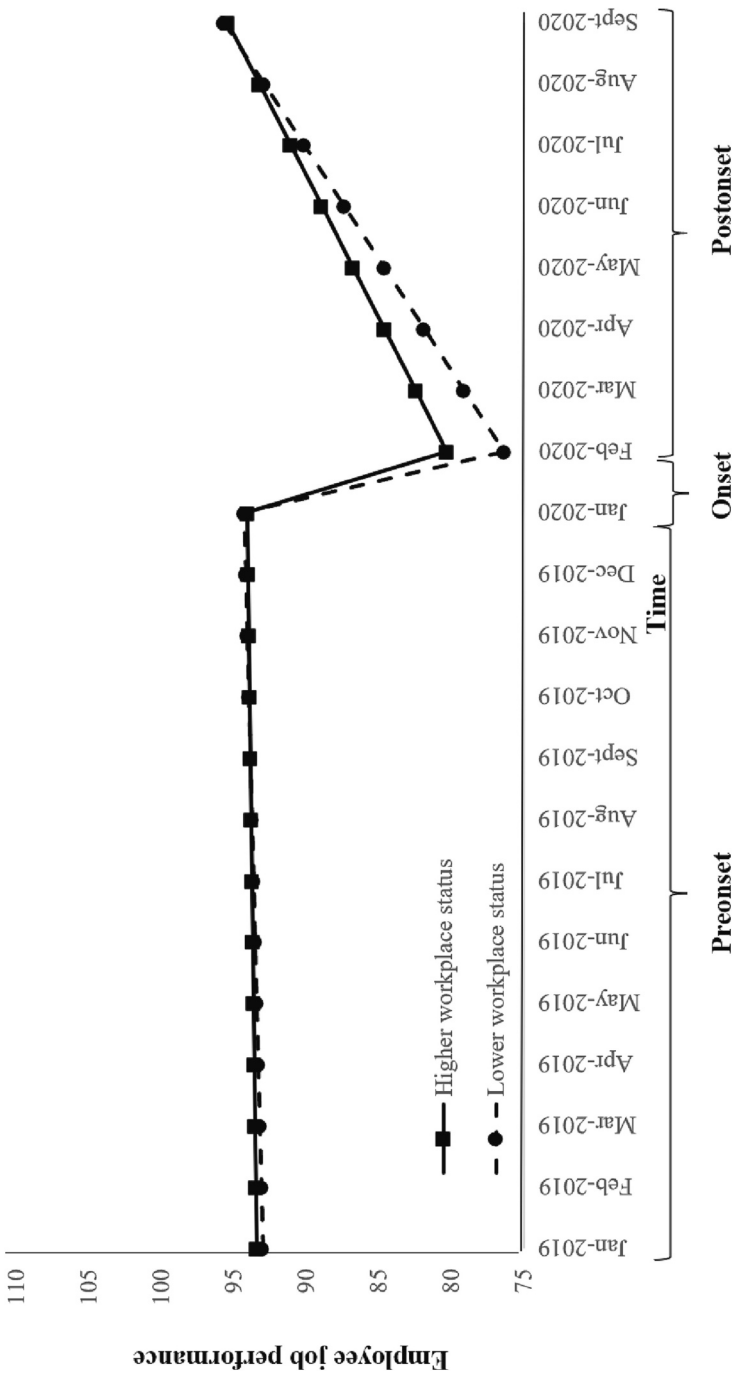

Fig. 2. Employee job performance over time for employees with higher/lower levels of workplace status.

postonset period of COVID-19, employees with lower occupational status have higher job performance. We suggest that employees with lower occupational status may be more motivated to increase performance to make up for their loss during the onset of COVID-19. Future research can test this explanation and further understand the psychological mechanisms for why lower occupational status employees have a higher performance recovery during the postonset period.

Despite the support for these moderating hypotheses, we did not find support for the role of SES on job performance trajectories. Our result that SES did not function as a moderator might be explained by existing studies that have shown that higher SES resulted in a greater decline in well-being (Wanberg et al., 2020) in response to COVID-19. These studies suggest that resource loss is subjective and may be experienced to a greater extent for higher SES individuals (Hobfoll, 2011; Wanberg et al., 2020). Hence, higher SES employees may utilize resources to manage their greater decline in well-being as opposed to focusing on job performance, resulting in a non-significant difference in job performance trajectories between higher and lower SES employees. Our results open new avenues for future research to explore the subjective resource loss stemming from different levels of SES (Wanberg et al., 2020) and how such resources are used towards/diverted away from job performance.

We also did not find support for our hypothesis that lower workplace status strengthened the positive job performance trajectory during the postonset period. Since workplace status is derived from competence (Chen et al., 2012; Liu et al., 2020), higher workplace status employees may be motivated to increase their performance post COVID-19 to maintain such status. That is, lower workplace status employees work harder to make up for the greater disruption to their work due to COVID-19 in order to make up for lost income, while higher workplace status employees also follow the same trajectory of job performance due to their desire to maintain their workplace status (Flynn, 2003; Flynn et al., 2006). Future research can examine the different reasons why higher and lower workplace status employees may follow the same positive performance trajectories during the postonset of COVID-19.

Finally, we contribute to the status literature by simultaneously examining different sources of status and identifying the roles of occupational and workplace status in moderating how employees react to COVID-19. Status has been a pervasive and critical construct in organizational research, and scholars have found that status can help explain a variety of phenomena within and between organizations (Chen et al., 2012; Kish-Gephart et al., 2023; Sauder et al., 2012). In spite of such fruitful advancement, the status literature is limited in identifying and differentiating the roles of status stemming from different sources/levels (Piazza & Castellucci, 2013). Our research focuses on the roles of status from society, occupation, and workplace in moderating the impacts of COVID-19 on employee job performance over time. In doing so, we identify the importance of features related to proximal characteristics (i.e., occupation or workplace) of status associated with the job in impacting job performance. In particular, we found that occupational status is the most influential factor that can determine job performance during both the onset and postonset periods of COVID-19. Such result responds to calls for studies to examine occupational status as a critical factor (Kish-Gephart et al., 2023; Kramer & Kramer, 2020) that may influence the employee response to life-changing events such as COVID-19, both during its onset and postonset periods. Thus, our work inspires future research to focus on how employees of different occupational status are impacted when encountering different events in society (i.e., recessions, Kim & Ployhart, 2014).

4.2. Practical implications

Our findings have several practical implications. First, using performance archival data we found that the onset of COVID-19 results in a drastic decrease in job performance. At the onset of COVID-19, employees face great pressure to adjust and protect themselves from the pandemic and thus may alter their focus away from work tasks. Hence, practitioners should consider how to manage COVID-19 in such a way to alleviate the dangers of COVID-19, so that employees can focus on job performance. For instance, as with the firm in our study, during the postonset period, companies can provide more COVID-19 prevention supplies (e.g., hand sanitizer and disinfectant) and institute routinized safety measures (e.g., checking body temperature, organizing regular nucleic acid tests) as well as COVID-19 related HR practices (e.g., wearing of masks, social distancing). By implementing these safety measures, employees may feel free from the dangers of COVID-19 and can focus their efforts on job performance.

Second, we also revealed that occupational and workplace status weakens the job performance decline during the onset of COVID-19. Thus, managers can help employees find meaning and value in their occupations (Grant, 2008) in order to decrease perceived occupational stigma as well as foster respect and social support among employees to decrease the negative effects of an adverse shock such as COVID-19 on job performance. We also suggest that organizations can pay more attention to those frontline employees with lower occupational status, as these employees are most adversely affected by the onset of COVID-19. One human resource intervention that organizations can provide is pandemic prevention and health training to help employees feel protected during the onset of the pandemic. Further, vocational training to improve work skills (Akkermans et al., 2020) and psychological intervention strategies such as mindfulness (Zheng et al., 2022) may also help these employees to be more resilient in facing with stressful work events.

Lastly, our results show that employees with lower occupational status were able to increase their job performance trajectory in the postonset period at a faster rate compared to those of higher occupational status. This suggests that managers should make use of the efforts of such employees during the postonset period to help the firm reach high performance as it attempts to recover from the adverse economic effects of COVID-19.

4.3. Limitations and directions for future research

Despite critical implications to theory and practice, our research also has limitations that provide avenues for future work. First, while we used EST to build our theoretical model, we did not measure the actual psychological experiences of employees towards COVID-19 and how employees perceived such event strength during the onset and postonset periods. Existing research has found that

COVID-19 induced higher depressive symptoms (Wanberg et al., 2020), engendered mortality salience and increased state anxiety (Hu et al., 2020), and affected job search behavior (McFarland et al., 2020). Meanwhile, Liu et al. (2021) have revealed that employees' perceived COVID-19 crisis strength would affect their work engagement and taking charge at work. Our study advances this line of research by revealing that COVID-19 also has an impact on employee job performance trajectories. Future research can extend our study by examining the underlying psychological mechanisms that can help explain how COVID-19 influences job performance (Wanberg et al., 2020).

Second, while our results are robust even after controlling for the department fixed effects, the context of our study occurs in one single firm in China. Hence, we are unable to generalize our results across different countries, regions, and industries. In particular, our results may depend on the context of how China – as the first country facing COVID-19 – managed such pandemic. Specifically, at the initial onset of COVID-19, China implemented a series of policies encouraging people to stay at home and limit production, resulting in supply chain disruptions and decreased output for many firms. Such a sharp downturn was followed by a rapid economic recovery during the postonset period. While we designed our research study to account for job performance that was evaluated separately from the economic output of the firm (or the individual), it is possible that the policies that affect China's macro-economic recovery may have some influence on the positive job performance trajectory in the postonset period. For instance, the increase in job performance in the postonset period might only occur when the onset period is relatively short (as in the case during the initial outbreak of COVID-19 in China). Future work can examine whether the length of the onset period is a critical factor by replicating this study in other countries and industries to understand how job performance trajectories may change depending on the macro-contextual response to COVID-19. Future studies can examine how employees respond to COVID-19 in other countries.

Third and relatedly, we focused on the initial onset of the COVID-19 pandemic in China, which provided a setting where the effects of COVID-19 were not well known. This provided an ideal setting to investigate the impact of the COVID-19 pandemic on employee job performance during the periods of preonset, onset, and postonset. However, to extend such work, future studies can consider the cyclical effects of subsequent outbreaks. For instance, Roulet and Bothello (2022) noted that: “the COVID-19 pandemic cannot be characterized as one disruptive event but rather as a series of cascading and intermittent disruptive events, ranging from the discovery of the coronavirus in late 2019 to multiple subsequent variants and resurgences” (p. 7). Future research can further investigate how and when employees respond to the resurgences of COVID-19 and adapt to the “new normal” in the post-pandemic era.

Fourth, since individuals' and organizations' adaptability to the crisis might be nonlinear (Balkin & Schmit, 2018; Guastello, 2010), it is plausible that the employee job performance trajectory during the postonset period experiences a steep initial upward climb and then increases slowly. To test this possibility, we added postonset squared into the estimation of our study (Lang & Bliese, 2009; McFarland et al., 2020). The results showed that the coefficient for postonset squared was significant (postonset^2, $\gamma = -1.53$, $p < .001$), while the coefficient for postonset remained significant (postonset, $\gamma = 12.50$, $p < .001$), supporting both linear and nonlinear effects. This nonlinear effect can be explained by the interplay of the individual (i.e., family situations that engender more stress from COVID-19), organizational, and societal factors that jointly affect the event strength of COVID-19 (Roulet & Bothello, 2022). We encourage future research to delve into why such event may be nonlinear in determining job performance.

Finally, it is also possible that some individuals may have positive performance boosts due to the pandemic. For example, unmarried/single workers without children may have fewer distractions from work and therefore may not experience a drastic decrease in performance, or even a performance boost during the onset of the pandemic. To test this possibility, we conducted additional analyses to examine the moderating effects of marital status or having children. The results showed a non-significant interaction between onset and marital status ($\gamma = -0.63$, *n.s.*) as well as between onset and having children ($\gamma = -4.21$, *n.s.*), suggesting that these two family-related factors did not affect job performance trajectories after COVID-19. However, future research can consider other individual-level factors (e.g., prosocial motivation, Zhu et al., 2021) or firm interventions that may result in boosts to job performance trajectories due to COVID-19.

4.4. Conclusion

Based on EST, our research has built a theoretical model to examine the impacts of COVID-19 on employee job performance during the onset and postonset periods and explore the moderating effects of different types of status. Using the matched survey and archival data and utilizing DGM, we found that employee job performance decreased dramatically at the onset of COVID-19, but increased gradually during the postonset of COVID-19. In addition, we found that the job performance decrease due to the onset of COVID-19 was weakened by higher occupation and workplace status, while the job performance increase during the postonset period of COVID-19 was strengthened for employees with lower occupational status. We hope future research can unpack other underlying mechanisms and boundary conditions to explain how and when macro events like COVID-19 may impact employee workplace behaviors over time.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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CRediT authorship contribution statement

Xin Liu: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Roles/Writing - original draft; Writing - review & editing.

Xiaoming Zheng: Conceptualization; Data curation; Funding acquisition; Resources; Supervision; Roles/Writing - original draft; Writing - review & editing.

Byron Y. Lee: Conceptualization; Methodology; Supervision; Validation; Roles/Writing - original draft; Writing - review & editing.

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Appendix A

We used Stata 14 to run a multilevel mixed-effects linear regression with restricted maximum likelihood. Stata code for hypothesis testing was summarized as follows.

To test Hypothesis 1 and 2:

mixed performance preonset onset postonset c_age c_tenure c_edu gender|| YGID: || _all: preonset onset postonset, reml

To test Hypothesis 3a and 4a:

mixed performance c.c_ses##c.preonset c.c_ses##c.onset c.c_ses##c.postonset c_age c_tenure c_edu gender|| YGID: || _all: preonset onset postonset, reml

To test Hypothesis 3b and 4b:

mixed performance c.c_os##c.preonset c.c_os##c.onset c.c_os##c.postonset c_age c_tenure c_edu gender|| YGID: || _all: preonset onset postonset, reml

To test Hypothesis 3c and 4c:

mixed performance c.c_ws##c.preonset c.c_ws##c.onset c.c_ws##c.postonset c_age c_tenure c_edu gender|| YGID: || _all: preonset onset postonset, reml

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