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Being Aware of Death: How and when Mortality Cues Incite Leader Expediency Versus Servant Leadership Behaviour

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ABSTRACT The COVID-19 crisis has been associated with existential concerns regarding mortality. These concerns, described as 'mortality cues', can influence people's emotions, behaviours, and the quality of leadership in organizations. Using the contingency model of death awareness (CMDA; Grant and Wade-Benzoni, 2009), we provide new evidence on how mortality cues can incite negative and positive leadership behaviours via two forms of death awareness: death anxiety and death reflection. Specifically, we theorize that mortality cues can increase leader death anxiety, giving rise to leader expediency (a leader's use of unethical practices to expedite work for self-serving purposes); however, mortality cues can also facilitate leader death reflection and, consequently, servant leadership behaviour. We further suggest that leaders' responses to mortality cues depend on their psychological capital (PsyCap), such that leaders with high (vs. low) PsyCap respond to mortality cues with less expediency (via death anxiety) and more servant leader behaviours (via death reflection). We support our hypotheses through three separate studies using an experiment, time-lagged data from healthcare workers, and daily diary data from non-healthcare professionals. We conclude that mortality cues have a double-edged influence on leadership behaviour. We also discuss the theoretical and practical implications of the findings.

Keywords: mortality cues, leader death anxiety, leader death reflection, leader expediency, servant leadership

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INTRODUCTION

The COVID-19 pandemic is regarded as one of the most serious public health crises in recent history (Kim et al., 2021; Steinbach et al., 2021). Following the outbreak, governments worldwide enforced travel restrictions, lockdowns, and quarantines to curb the rapid spread of infections, hospitalizations, and deaths. These actions induce mortality cues that remind individuals both inside and outside organizations about the inevitability of death (Greenberg and Arndt, 2011). Previous research in organizational settings has examined how employees navigate work, family, and health-related issues when exposed to mortality cues (e.g., Trougakos et al., 2020). During the pandemic, as organizations implemented safety protocols and remote work arrangements, employees turned to their leaders for guidance in handling anxiety, stress, and other work-related difficulties (Hu et al., 2020). However, existing literature has largely overlooked the reactions of leaders themselves to mortality cues. Despite their vital role in supporting and guiding employees, studies have primarily focused on employee outcomes, which may not fully apply to the unique context of organizational leaders. Consequently, understanding how leaders respond to mortality cues is an essential theoretical and practical concern for organizations.

Mortality cues present leaders with the dual challenge of addressing business priorities while also supporting employees in coping with various sources of stress. Balancing these competing demands is tough and often requires more effort or resources than organizational leaders have available (D'Auria and De Smet, 2021). In such instances, expediting work may appear to be a smart and efficient way of getting things done without causing immediate harm. In fact, in a global risk management survey, 65 per cent of financial firms admitted to cutting corners on due diligence checks during the pandemic (Fintech Times, 2021). The Building Engineering Services Association, a UK trade association, also warned leaders against using the pandemic as a pretext to taking shortcuts (BESA, 2020). Consequently, leader expediency, defined as 'the use of unethical practices to expedite work for self-serving purposes' (Greenbaum et al., 2018, p. 525), has become a major concern for many organizations. In contrast, some leaders played a crucial role in helping employees cope with the pandemic (e.g., Hu et al., 2020). Despite facing their own personal and professional challenges, these leaders aimed to be good citizens, holding themselves and others accountable for acceptable behaviour. They also prioritized the interests of their followers while promoting moral causes and working toward the greater good of society (viz. servant leadership; van Dierendonck, 2011).

Emerging evidence suggests a stark contrast in how leaders responded during the pandemic, with some pursuing self-serving interests and others working selflessly to improve the lives of those around them (Kim et al., 2021; Li et al., 2021; Steinbach et al., 2021). A self-serving emotional reaction occurs when an individual, driven by increased fear, panic, and dread of death, becomes preoccupied with their own survival – a concept known as *death anxiety* (Grant and Wade-Benzoni, 2009). This concept has been the focus of research using terror management theory to examine the emotional aspects of death awareness (Iverach et al., 2014; Pyszczynski et al., 2015; Routledge and Juhl, 2010). Conversely, the more cognitive and selfless reaction could manifest as a person's rational

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contemplation of life's meaning and purpose, resulting in the propensity to make lasting contributions for the benefit of others – *death reflection* (Grant and Wade-Benzoni, 2009). Although both accounts (i.e., death anxiety and death reflection) are critical, when considered separately, they provide only a partial picture of how mortality cues influence leadership behaviours. Unless they are investigated concurrently, we risk missing an opportunity to consolidate knowledge on death awareness and assist organizations in better supporting leaders and reassuring employees in situations where mortality cues are most salient.

To gain deeper insights into leaders' responses to mortality cues, we utilize the contingency model of death awareness (CMDA; Grant and Wade-Benzoni, 2009) – a comprehensive framework that reconciles the emotional and cognitive psychological mechanisms of death awareness – to investigate how mortality cues incite leader expediency and servant leadership behaviours. According to CMDA, mortality cues can trigger self-protective or prosocial responses through two distinct forms of death awareness: an emotional experience (death anxiety) that encourages self-protective responses, and a cognitive experience (death reflection) that encourages prosocial responses. Given that self-protective motivation prevents people from recognizing the moral implications of their actions (Mitchell et al., 2018; Wang and Murnighan, 2011), we contend that exposure to mortality cues induces a sense of fear and panic in the form of death anxiety, prompting leaders to violate moral standards under the guise of performing better (leader expediency). Second, we argue that mortality cues encourage leaders to engage in deliberate contemplation about the meaning of life (i.e., death reflection), which in turn elicits servant leadership behaviour. We specifically focus on servant leadership because it is a crucial indicator of leaders' prosocial motivation (Stollberger et al., 2019) and helps explain additional variance beyond other selfless leadership behaviours (Hoch et al., 2018). Therefore, our examination of leader expediency and servant leadership as behavioural outcomes of death anxiety and death reflection is theoretically relevant for understanding the organizational consequences of mortality cues. While expediency behaviour exemplifies how some leaders are driven by self-interest and the desire to protect themselves from personal vulnerability (e.g., Kim et al., 2021), servant leadership reflects the prosocial and other-oriented responses exhibited by some leaders during the crisis (e.g., Li et al., 2021).

CMDA further suggests that individual differences should be considered when assessing reactions to mortality cues, whether through death anxiety or death reflection (Grant and Wade-Benzoni, 2009, p. 609). Age-related differences, for example, can explain why some individuals cope with mortality cues better than others, whereas the impact of death-related experiences may vary depending on people's ability to leverage critical personal resources, such as high self-esteem and a positive outlook on life (Lykins et al., 2007; Pyszczynski et al., 2015). These assumptions reinforce the importance of personal resources as possible boundary conditions for mortality cues. Considering this, we argue that the influence of morality cues on leader death anxiety and death reflection, and consequently their tendencies toward expediency and servant leadership is conditional on a key personal resource (e.g., *leader psychological capital*; PsyCap). PsyCap is defined as 'one's positive appraisal of circumstances

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and probability of success based on motivated effort and perseverance' (Luthans et al., 2007, p. 550). We contend that leaders with low PsyCap are more likely to react to mortality cues with increased death anxiety, and ultimately engage in expediency behaviours. By contrast, leaders with high PsyCap are more likely to respond to mortality cues with death reflection and ultimately engage in servant leadership behaviour (see Figure 1 for our theoretical model).

Our research makes several important contributions to the literature on mortality salience and leadership. First, we extend research on mortality salience in organizational settings by shifting the focus from an employee-centric to a leader-centric perspective. This approach is critical as previous research has primarily examined employee reactions to mortality cues (e.g., Jacobsen and Beehr, 2022; Sliter et al., 2014; Yuan et al., 2019), despite their potential consequences for leaders (Hu et al., 2020). In this vein, we offer new theoretical insights into how mortality cues can induce negative (leader expediency) and positive (servant leadership) leadership behaviours. Such insights also deepen our understanding of important life experiences that shape leadership behaviours (Zacher et al., 2011).

Second, we harmonize the psychological mechanisms of CMDA and provide a more holistic picture of the distinct emotional (death anxiety) and cognitive (death reflection) pathways through which mortality cues elicit different reactions in leaders. Extant research has concentrated on the negative emotional pathway (e.g., Hu et al., 2020; Sliter et al., 2014), overlooking the possible benefits of mortality cues in organizational contexts (Yuan et al., 2019). By examining the emotional and cognitive pathways simultaneously, our model allows for robust theoretical advancement and provides fresh evidence on the dual sides of mortality cues. Third, we complement CMDA (Grant and Wade-Benzoni, 2009) and the broader mortality salience literature (Greenberg and Arndt, 2011) by incorporating a resource-based perspective into our model and addressing the need to better understand personal coping resources for death-related concerns (Pyszczynski et al., 2015). In this regard, we add to nuance by introducing leader PsyCap as a critical personal resource, providing comprehensive insights into how and when mortality cues influence leader expediency (via death anxiety) and servant leadership (via death reflection).

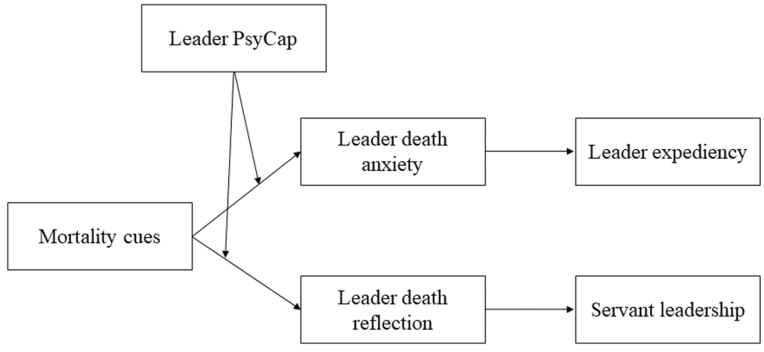

Figure 1. Conceptual model

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THEORY AND HYPOTHESES

In organizational contexts, mortality cues can be classified as internal or external, based on their source or origin (Grant and Wade-Benzoni, 2009). Internal mortality cues originate in the work environment. They are prevalent among health and social care workers who are frequently exposed to events that directly threaten their wellbeing (e.g., drug hazards and sharps injuries) or situations where they are in close proximity to others at risk (e.g., when caring for terminally ill patients). External mortality cues, in contrast, originate from outside the work environment through exposure to obituaries, infection-control measures, extensive media coverage of deaths, and the dying process. Regardless of their source, mortality cues create death awareness, a constellation of diverse human emotional and cognitive responses to mortality cues (Cozzolino et al., 2004; Grant and Wade-Benzoni, 2009; Greenberg and Arndt, 2011).

According to CMDA, there are two distinct forms of death awareness associated with morality cues (Grant and Wade-Benzoni, 2009). The first is *death anxiety*, a negative emotional response characterized by fear and apprehension about the prospect of death (Cozzolino et al., 2004; Strachan et al., 2007). Death anxiety can be measured either as a relatively stable, less malleable characteristic (i.e., trait death anxiety, Sliter et al., 2014) or a more transient impulsive state (Hu et al., 2020) – although the behavioural outcomes in both cases are likely to be identical (Rasmussen et al., 1998). Considering that the experience of COVID-19 mortality cues varied daily or weekly and from person to person, we conceptualize death anxiety as an emotional *state* rather than a personality *trait*. The second form of death awareness associated with mortality cues is *death reflection*, a more adaptive and cognitive response (Grant and Wade-Benzoni, 2009; Yuan et al., 2019). Death reflection manifests as individuals being more rational, thoughtful, and appreciative of their purpose in life (Lykins et al., 2007; Vail III et al., 2012). Similar to death anxiety, we operationalize death reflection as a state, focusing on its growth-oriented features.

CMDA stipulates that death anxiety and reflection represent distinct pathways through which mortality cues can influence negative and positive organizational behaviours, respectively. Death anxiety forms the basis of a person's emotional and self-protective reactions to mortality cues. This premise is based on terror management research (Greenberg et al., 1997; Solomon et al., 1991), suggesting that death is inevitable and that its thoughts can be terrifying. For many, this fear stems from the prospect of losing things that matter most in life, including intimate relationships, a source of income, wealth, and social status. To counteract this fear, individuals cling to cultural worldviews or belief systems that emphasize immortality (Routledge and Juhl, 2010; Stein and Cropanzano, 2011). While such systems can reduce the fear of death, even if only temporarily, they also encourage maladaptive ways of thinking or behaving, such as being overly aggressive toward others (especially those who hold a different worldview) and having greater proclivity to abuse one's authority (Cozzolino et al., 2004; Iverach et al., 2014; Pyszczynski et al., 2015). Thus, CMDA suggests that mortality cues and the resulting emotional state of death anxiety can lead to the violation of moral standards (Greenberg et al., 2010).

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The emotional and self-protective aspects of death awareness are often criticized for running counter to real-life examples of individuals responding more positively to death-related stimuli (Lykins et al., 2007; Vail III et al., 2012). Some critics believe that mortality cues can inspire people to have a more positive outlook on life, allowing them to build and foster stronger relationships with others (Cozzolino, 2006). Hence, viewing death awareness from a predominantly anxiety-driven perspective, as has been the case in the terror management literature, may obscure the more positive experiences and behaviours that mortality cues may generate. To address this issue, CMDA proposes the cognitive concept of death reflection, which is a rational and more positive or adaptive reaction to mortality cues (Grant and Wade-Benzoni, 2009), arguing that such cognitive responses can trigger prosocial motivation. In the COVID-19 context, for example, this prosocial response was observed in reports of people being more helpful toward the most vulnerable in society (Whillans et al., 2020) or volunteering as frontline workers, despite losing loved ones. From this alternative viewpoint, we argue that a leader's prosocial response to mortality cues via the cognitive experience of death reflection is displayed in servant leadership, an important leader behaviour grounded in prosociality (Stollberger et al., 2019) and the willingness to serve and prioritize others' needs (Greenleaf, 1977; Liden et al., 2008).

Although previous research provides valuable insights into the emotional and cognitive aspects of death awareness, namely death anxiety and death reflection, the evidence base remains predominantly conceptual, with limited empirical and practical applications. To enhance our understanding of morality cues in organizations (Stein and Cropanzano, 2011), we draw insights from CMDA (Grant and Wade-Benzoni, 2009), using the COVID-19 pandemic as a practical context (see Johns, 2006) for exploring leaders' reactions to mortality cues. We argue that these states of death awareness have implications for leaders' self-protective (e.g., leader expediency) and prosocial (e.g., servant leadership) responses. As previously mentioned, our focus on leader expediency as a self-protective reaction to mortality cues via death anxiety is crucial because prior research has demonstrated that self-protective motivation is often pursued recklessly and can result in self-serving unethical behaviours (Hassan et al., 2023; Mitchell et al., 2018; Wang and Murnighan, 2011). Additionally, we explore servant leadership as a proactive response to mortality cues via leader death reflection because this behaviour is a critical manifestation of leaders' prosocial motivation (Stollberger et al., 2019), with a greater influence on both employee and organizational outcomes than other positive leadership constructs (Hoch et al., 2018). Furthermore, recognizing that leaders can concurrently engage in self-serving and other-serving behaviours in the work environment (Liao et al., 2018; Lin et al., 2016), we extend CMDA by reconciling the negative and positive psychological mechanisms through which mortality cues relate to leader expediency and willingness to serve (see Figure 1 for our conceptual model).

Mortality Cues, Leader Death Anxiety, and Leader Expediency

Following CMDA, we argue that mortality cues can induce death anxiety because people react emotionally when they become aware of death (Grant and Wade-Benzoni, 2009).

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In this sense, mortality cues are associated with feelings of existential crisis (Grant and Wade-Benzoni, 2009), including concerns about 'the prospect of dying or losing a loved one in death', 'the realities of life after death', and self-protection. For example, Bacharach and Bamberger (2007) established a link between firefighters' experiences of the deadly 9/11 terrorist attack on the World Trade Center and their feelings of anxiety and helplessness. In another study, Routledge and Juhl (2010) explained that individuals are generally prone to death-related terror when confronted with situations in which reminders of mortality are more salient (see also Hu et al., 2020). This line of reasoning is consistent with the assumption that life-threatening events increase death anxiety, resulting in morally questionable behaviours (Bacharach and Bamberger, 2007; Belmi and Pfeffer, 2016; Strachan et al., 2007). Indeed, life is one of the most salient resources that people strive to 'protect' (Hobfoll, 2001); any threat will inevitably increase leaders' fear and dread of their own mortality. Therefore, when leaders are exposed to mortality cues and grave threats to human existence, an increase in death anxiety is expected.

In addition, leaders experiencing death anxiety tend to violate moral standards for self-serving purposes, with the latter being a crucial aspect of leader expediency (Greenbaum et al., 2018). This idea relates to CMDA, which suggests that death anxiety induced by mortality cues can trigger self-protective instincts and fuel the desire to exaggerate one's self-worth or personal abilities (Grant and Wade-Benzoni, 2009). Indeed, the focus on self-protection tends to prevent people from recognizing the moral consequences of their actions, which translates into self-serving and unethical conduct (Wang and Murnighan, 2011). Compared to other forms of unethical leadership, expediency can be viewed as less morally intense because leaders who engage in such behaviours are primarily motivated to drive efficiency for self-serving reasons, even though the consequences of their actions are not always immediate (Greenbaum et al., 2018, p. 527). For such leaders, death anxiety should increase their need to protect themselves and guarantee survival, making them less likely to recognize how their actions violate moral norms (Pyszczynski et al., 2015). This is consistent with research indicating that a self-protective instinct drives people to prioritize their own interests over those of others, even if it means engaging in morally questionable behaviour (Mitchell et al., 2018). In this respect, one could argue that death anxiety triggered by morality cues can induce leaders to pursue their self-interest, exaggerate their capabilities, and violate moral principles, under the guise of being more efficient in their jobs. In other words, these leaders are likely to take shortcuts and ignore performance standards, while disregarding the potential harm their actions may have on others.

According to CMDA, people experiencing death anxiety are more susceptible to poor impulse control, making it difficult for them to consider the potential consequences of their actions. This assertion is particularly pertinent to leader expediency, since this kind of behaviour does not always involve immediate victims or cause obvious harm (Eissa, 2020). Moreover, research has shown that when people face life-threatening events, their moral information-processing capacity is impaired (Sliter et al., 2014). Indeed, during the COVID-19 crisis, some leaders took shortcuts to appear more successful in combating the pandemic. Others have been strongly criticized for cutting corners in handling health and safety protocols (e.g., refusing to

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provide face masks at work, even while compelling their subordinates to work harder and smarter (BBC News, 2020)). These examples reflect the impulsive side of death anxiety, in which leaders direct limited resources toward self-protective measures to appear more effective at work while ignoring the potential harm their actions might have on others. Therefore, we argue that death anxiety mediates the relationship between mortality cues and leaders' propensity to expedite work through morally questionable means.

> *Hypothesis 1:* Mortality cues are positively and indirectly related to leader expediency via leader death anxiety.

Mortality Cues, Leader Death Reflection, and Servant Leadership

Contrary to the proposed emotional and self-protective pathway, CMDA also proposes an alternative cognitive pathway in which people react to mortality cues rationally and deliberately (Grant and Wade-Benzoni, 2009). This cognitive pathway indicates a more optimistic view of death awareness, highlighting how individuals are likely to respond with thoughtful and intrinsically meaningful actions (e.g., Cozzolino, 2006; Cozzolino et al., 2004; Vail III et al., 2012). Indeed, as cognitive social beings, humans have a strong intellectual capacity for logical thought and self-reflective reasoning in the face of potentially life-threatening events (Solomon et al., 1991). This ability enables people to approach death carefully and analytically (Cozzolino, 2006), putting themselves in the hypothetical situation of 'it could have been us' (Chen et al., 2020). For example, research shows that people who have had near-death experiences, such as witnessing an earthquake, are more likely to value life and see their own existence as serving a greater purpose (Lykins et al., 2007; Vail III et al., 2012). These arguments are particularly relevant in the context of COVID-19, which was characterized by high infection rates, deaths, and hospitalizations. Because leaders were responsible for guiding and supporting their followers during the pandemic (Hu et al., 2020), they had an opportunity to reflect on their own lives and engage in a more analytic and deliberative response to mortality cues while helping others cope with the crisis. Therefore, despite being inherently terrifying, mortality cues may induce the cognitive state of death reflection, allowing leaders to show concern for the growth of others (Cozzolino, 2006).

For leaders, the desire to help others may manifest as a proactive move to serve the interests of subordinates and the community (viz. servant leadership behaviour; Greenleaf, 1977; Liden et al., 2015; Stollberger et al., 2019). Servant leadership involves a focus on service and prioritizing the interests of others, with behaviours that include being sensitive to followers, creating value for the community, providing help to followers, empowering and helping followers to grow, putting followers first, and behaving ethically (Liden et al., 2008). These behaviours collectively characterize a leader's willingness to serve others (Liden et al., 2015), implying that servant leadership is a superordinate construct with relationships flowing from the construct to its dimensions (Hoch et al., 2018). As these dimensions are interconnected, they are usually combined into an

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overall servant leadership construct (Liden et al., 2015). Therefore, following existing studies (e.g., Hu et al., 2020; Liao et al., 2020), we operationalize servant leadership as an overarching construct and do not expect mortality cues to have differential effects on its specific dimensions. We also argue, based on the cognitive mechanism of CMDA, that mortality cues will increase leader death reflection and, in turn, the behavioural manifestations of servant leadership.

Consistent with CMDA, we acknowledge the possibility that leaders experiencing death reflection in response to mortality cues will engage in compassionate acts of stewardship and service (e.g., putting subordinates' interests first, helping them achieve their career and personal goals, and promoting the greater social good). These growth-oriented characteristics encourage the development of long-lasting social connections with others, making leaders who positively reflect on death more likely to be other-focused than self-focused (Grant and Wade-Benzoni, 2009). This supports Yuan et al.'s (2019) research that decomposes death reflection into the motivation to help, motivation to live, legacy, putting life in perspective, and a greater desire to feel connected with other people. Similarly, research demonstrates that a strong sense of social connection with others represents a key enabler of servant leadership (van Dierendonck, 2011). In this respect, we argue that leaders experiencing death reflection ultimately adopt a more proactive, other-oriented mindset and an increased willingness to serve others. They would make decisions based on the best interests of their followers and provide vital resources to help them grow and develop. Taken together, we expect leader death reflection to serve as a key cognitive mechanism that connects mortality cues to servant leadership behaviour.

> *Hypothesis 2:* Mortality cues are positively and indirectly related to servant leadership behaviour via leader death reflection.

The Moderating Role of Leader Psychological Capital

According to CMDA, the way individuals evaluate their personal experiences determines whether mortality cues can induce death anxiety or death reflection. For instance, Grant and Wade-Benzoni (2009) argued that older workers are better equipped to set realistic goals, prioritize personal resources, and control their thoughts and emotions. As a result, they perceive mortality cues with a greater sense of reflection, rather than succumbing to the fear of death. In addition, positive personal resources such as self-esteem, self-awareness, self-confidence, and a positive mindset may serve as antidotes for poor mental health in difficult situations (Luthans and Youssef-Morgan, 2017). Given these considerations, we theorize PsyCap as a positive personal resource (Luthans et al., 2007) that facilitates leaders' responses to mortality cues. In other words, leader PsyCap acts as a first-stage moderator, reducing the impact of mortality cues on death anxiety (an emotional state), while enhancing the impact on death reflection (a cognitive state).

PsyCap is associated with an individual's ability to regulate emotions, thoughts, and behaviours when reacting to external factors (Avey et al., 2009; Luthans et al., 2007). It is considered a 'state-like' personal resource that is relatively stable over time (Luthans

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and Youssef-Morgan, 2017) and comprises four main components: *self-efficacy* (being confident and capable of exerting the necessary effort to achieve desired results), *optimism* (the ability to focus one's mind on the positive aspects of current and future situations), *hope* (the ability to persevere and, when necessary, redirect one's path toward achieving desirable goals), and *resilience* (the ability to recover quickly from adversity and thereby achieve desirable goals). These four components distinguish PsyCap from other positive personal resources examined in the literature (Luthans et al., 2007; Luthans and Youssef-Morgan, 2017). In general, people with high PsyCap tend to show a greater sense of efficacy, optimism, hope for the future, and resilience in challenging situations. Conversely, those with low PsyCap tend to experience fear, negative attitudes when faced with difficulties, and ultimately struggle to cope effectively with adversity (Baron et al., 2016; Luthans and Youssef-Morgan, 2017).

Based on these psychological attributes, we argue that leader PsyCap mitigates the association between mortality cues and leader death anxiety. This is because individuals with high PsyCap are better equipped to embrace the positive aspects of challenging circumstances (Luthans et al., 2007; Walumbwa et al., 2010). Likewise, leaders with high PsyCap have the mental capacity to perceive mortality cues as manageable challenges and actively confront existential concerns about life. This may serve as a crucial coping mechanism for potential feelings of death anxiety. For example, these leaders can regulate the negative emotions of fear, panic, and vulnerability (Luthans and Youssef-Morgan, 2017), which are inherently linked to concerns about the inevitability of death. High PsyCap can, thus, act as a buffer against death anxiety resulting from mortality cues, thereby reducing the likelihood of self-serving morally questionable behaviours. On the other hand, leaders with low PsyCap are less adept at handling adversity because of their inability to persevere and maintain composure in difficult situations (Avey et al., 2009; Roche et al., 2014). When exposed to mortality cues, these leaders may lack the optimism and confidence needed to protect themselves from potentially life-threatening events. Consequently, they are less likely to overcome death anxiety and avoid expediency behaviour.

Furthermore, we argue that leader PsyCap strengthens the extent to which mortality cues results in leader death reflection, as such leaders are more likely to approach distressing situations with a positive mindset (Roche et al., 2014; Walumbwa et al., 2010). Indeed, individuals with high PsyCap tend to remain composed and hopeful when confronted with life-threatening events (Fredrickson et al., 2003). This stems from their optimistic assessment of such circumstances and their ability to persevere until success is achieved (Luthans et al., 2007). Likewise, leaders with high PsyCap are likely to favourably appraise mortality cues and maintain constructive appreciation for the essence of life. Rather than being overwhelmed or consumed by existential concerns, they embrace death reminders as opportunities to reflect on the significance and purpose of existence. In contrast, leaders with low PsyCap are more likely to view mortality cues as a threat to their existence because they often lack a sense of hope, efficacy, optimism, and resilience needed in the face of adversity (Luthans and Youssef-Morgan, 2017). They may easily succumb to feelings of despair, which impair their ability to make rational decisions when confronted with mortality cues. Under these circumstances, such leaders are less able to serve others or, prioritize their subordinates' needs.

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Based on the above arguments, we hypothesize that leader PsyCap moderates the indirect influence of mortality cues on leader expediency and servant leadership via death anxiety and death reflection, respectively. Specifically, we posit that PsyCap functions as a psychological buffer against mortality cues and the negative consequences of death anxiety. It encompasses a set of positive psychological resources that mitigate feelings of vulnerability to existential concerns, which subsequently reduce the tendency for morally questionable behaviour in the form of leader expediency. In addition, leaders with high PsyCap have a greater sense of purpose and optimism, which enables them to focus on future opportunities rather than being overwhelmed by existential concerns. These positive characteristics can reinforce death reflection as a response to mortality cues, leading to servant leadership behaviour.

Hypothesis 3: The positive indirect relationship between mortality cues and leader expediency via leader death anxiety is stronger with higher (vs. lower) leader PsyCap.

Hypothesis 4: The positive indirect relationship between mortality cues and servant leadership via leader death reflection is stronger with higher (vs. lower) leader PsyCap.

OVERVIEW OF CURRENT RESEARCH

Our hypotheses were examined in three separate studies, with samples drawn from various organizational and institutional settings in the UK, Pakistan, and China. This allowed us to assess the COVID-19 pandemic in a multicultural context, considering the diverse experiences of leaders from different organizations and regions around the world. It is noteworthy that our multi-study design did not specifically aim to predict social and cultural differences; rather, we sought to enhance the credibility of our findings using different analytical techniques to establish external validity. Multi-study designs are increasingly common in business and management research, offering more reliable and illustrative insights into the phenomenon being studied (Eisenhardt and Graebner, 2007). They also facilitate the replication and extension of theoretical frameworks, particularly when incorporating diverse data collection strategies (Tsang and Kwan, 1999).

Study 1 aimed to establish a causal basis for how leaders' exposure to mortality cues might influence leader expediency and servant leadership behaviour via the emotional (death anxiety) and cognitive (death reflection) pathways in CMDA. This helps determine whether any observed change in exposure to mortality cues causes subsequent changes in leaders' emotional and cognitive responses. We used a randomized vignette-based experiment to determine whether mortality cues have indirect effects on leader expediency and servant leadership via leader death anxiety and reflection, respectively. According to Aguinis and Bradley (2014), this methodology 'enhances experimental realism and allows researchers to manipulate and control independent variables, thereby simultaneously enhancing both internal and external validity' (p. 2).

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Thus, we manipulated the independent variable by randomly dividing the experimental sample into two groups: high- and low-mortality cues. After establishing a causal basis for our research, we replicate and extend our findings in real-life settings in Studies 2 and 3, thereby providing solid data for establishing empirical generalizations (Tsang and Kwan, 1999).

Study 1

Participants and procedure. We recruited 250 participants for a randomized, vignette-based experiment from Prolific, an online subject recruitment platform specifically designed for academic research (e.g., Palan and Schitter, 2018). We used a pre-screening filter to select participants who were UK nationals, currently residing in the country, and held leadership positions with significant supervisory responsibility. These filters have been used in previous studies to recruit and study leaders (e.g., Kim et al., 2021) and have proven effective in generating high-quality and reliable research data (Eyal et al., 2022). Each participant received £0.88 for participating in the experiment. Following Hu et al.'s (2020) priming procedures, we manipulated two conditions for COVID-19 mortality cues (high vs. low) and randomly assigned participants to each condition. Participants were first shown a news summary in which the pandemic's prevalence was manipulated and were then asked to rate their levels of death anxiety and death reflection. Next, we provided a summary of how the pandemic impacted workers' mental health and organizational performance and asked participants to describe their expediency behaviour and willingness to serve others. We excluded participants who (i) failed our attention checks, and (ii) spent less than three minutes on the survey. We also excluded those who failed the following screening question: 'I often think about the COVID-19 pandemic as a big hoax'. This step was necessary because such individuals are unlikely to take the vignettes seriously or respond meaningfully. Our final sample included 235 participants (high mortality cues = 118; low mortality cues = 117). Our analyses yielded no significantly different findings with or without these dropped participants. On average, the participants were aged between 24 and 35 years, 71 per cent were women, and 80 per cent had been employed for up to 10 years.

Measures. All study variables were measured using a five-point Likert scale (1 = not at all; 5 = very much). For each survey question, respondents were encouraged to consider their experiences during the COVID-19 pandemic.

Leader death anxiety. Participants rated their experience of death anxiety based on Thorson and Powell's (1992) shortened nine-item scale. These items were presented in accordance with the emotional experiences described in CMDA. Sample items include 'I feel greatly troubled by the subject of life after death' and 'I feel worried about what happens to us after we die' ($\alpha = 0.86$).

Leader death reflection. Participants rated their experience of death reflection based on Yuan et al. (2019) 15-item scale. These items were presented in accordance with the

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cognitive experiences described in CMDA. Sample items include 'Thinking about death, I feel motivated to reflect on the things I still want to do' and 'Thinking about death, I feel motivated to try new things' ($\alpha = 0.87$).

Leader expediency. Participants rated their proclivity to engage in expedient behaviour in the context of COVID-19. The items were based on Greenbaum et al.'s (2018) four-item moral expediency scale, including 'I will cut corners to complete work assignments more quickly' and 'I will alter performance numbers to appear more successful' ($\alpha = 0.90$).

Servant leadership. We measured servant leadership behaviour using Liao et al.'s (2020) shortened five-item scale. These items focus specifically on behaviours unique to servant leadership behaviour with minimal overlap with other leader behaviours (e.g., ethical leadership). They have been validated as reliable indicators of servant leadership behaviour (Liao et al., 2020). Sample items include 'I will put my subordinate's best interests ahead of my own' and 'I will make my subordinate's development a priority' ($\alpha = 0.79$).

Manipulation check. Participants were asked to complete a five-item mortality cues scale adapted from French et al. (2000) and Sliter et al. (2014), assessing their level of concern in relation to COVID-19. Sample items include 'I am concerned that people are dying unexpectedly' and 'I am concerned that people are suffering due to COVID-19' ($\alpha = 0.76$).

Analysis and results. The effectiveness of our manipulation of COVID-19 mortality cues was assessed using an analysis of variance (ANOVA). We found that participants in the high mortality cues group were more concerned about the impact of COVID-19 than those in the low mortality cues group ($M_{high} = 3.60$, $M_{low} = 3.43$, $F(1.75, 87.98) = 4.64$, $p = 0.03$).

Prior to testing the hypotheses, we performed a series of confirmatory factor analyses (CFAs) using Mplus (Muthén and Muthén, 2010) to verify the discriminant validity of measurement items. Five parcels were created for each sub-dimension of death reflection (see Yuan et al., 2019) to ensure an adequate indicator-to-sample ratio (i.e., to reduce the number of parameter estimates relative to the sample size; Little et al., 2013). Our hypothesized four-factor model involving leader death anxiety and reflection, leader expediency, and servant leadership showed an adequate fit to the data ($\chi^2 = 382.51$, df = 222, SRMR =0.06, RMSEA =0.06, CFI =0.93, and TLI =0.92). This model performed better than the alternatives: a three-factor model in which leader death anxiety and reflection were combined (SRMR =0.11, RMSEA =0.09, CFI =0.80, and TLI =0.78), and a one-factor model involving all constructs (SRMR =0.15, RMSEA =0.15, CFI =0.47, and TLI =0.41).

Next, we conducted path analysis in Mplus to test Hypotheses 1 and 2. We modelled the indirect effects of the grouping variable (high mortality cues group = 1; low mortality cues group = 0) on leader expediency and servant leadership via leader death anxiety and

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reflection, respectively. In this regard, the low mortality cues group was our reference group, implying that all regression coefficients were interpreted relative to this group. The indirect effects were estimated using the product-of-coefficients (*ab*) approach, which is the default method in Mplus; *a* represents the regression path between the independent variable and mediator and *b* represents the regression path between the mediator and dependent variable (MacKinnon et al., 2007).

Table I shows the basic statistics and correlations among the focal study variables, and Table II shows the results of our hypotheses testing. As shown in Table II, our analysis showed mixed results. The indirect effect corresponding to Hypothesis 1 was significant and positive (ab = 0.09, SE = 0.04, p = 0.03, CI = [0.01, 0.17]), suggesting that participants in the high mortality cues group reported higher levels of death anxiety and leader expediency than those in the low mortality cues group. In other words, when mortality cues are more salient, leaders are more likely to experience death anxiety and engage in expediency behaviour (full support for Hypothesis 1). Furthermore, the indirect effect corresponding to Hypothesis 2 was significant and negative (ab = −0.07, SE = 0.04, p = 0.04, CI = [−0.14, −0.00]), suggesting that participants in the high mortality cues group reported lower levels of death reflection and servant leadership than those in the low mortality cues group. That is, when mortality cues are more salient, the experience of death reflection is less likely to promote servant leadership behaviour. This finding does not offer unequivocal support for Hypothesis 2; rather, it suggests a more complex picture related to the actual nature of mortality cues (whether internal or external) and possible moderator variables on leaders' experiences (e.g., personal characteristics). These issues were further addressed in Studies 2 and 3.

Study 2

Our experimental analysis from Study 1 provides causal evidence for Hypothesis 1, showing that leaders' exposure to mortality cues elicits death anxiety, resulting in an

Table I. *Correlations and descriptive statistics in study 1*

	Mean	*S.D.*	*1*	*2*	*3*	*4*	*5*	*6*
1. Manipulated variable (0 = low, 1 = high)	0.50	0.50	–					
2. Mortality cues (manipulation check)	3.52	0.62	0.14*	**0.76**				
3. Leader death anxiety	2.64	0.91	0.15*	0.26***	**0.86**			
4. Leader death reflection	3.52	0.57	−0.14*	0.25***	0.12	**0.87**		
5. Leader expediency	1.55	0.757	0.14*	0.26***	0.42***	0.11	**0.90**	
6. Servant leadership	3.54	0.67	−0.18**	0.08	−0.03	0.40***	−0.03	**0.79**

Note: Sample size (N) = 235 (High-mortality-cues group = 118; Low-mortality-cues group = 117). Reliability coefficients are displayed in bold on the diagonal.
*p < 0.05.
**p < 0.01.
***p < 0.001.

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Table II. *Results from path analysis with grouping variable in study 1*

	Leader death anxiety			*Leader death reflection*			*Leader expediency*			*Servant leadership*		
	B (SE)	*p*	*95% CI*	*B (SE)*	*p*	*95% CI*	*B (SE)*	*p*	*95% CI*	*B (SE)*	*p*	*95% CI*
Study variables												
Mortality cues grouping	0.27 (0.12)	0.02	0.04, 0.50	−0.16 (0.07)	0.03	−0.30, −0.02	0.12 (0.09)	0.20	−0.15, 0.12	−0.06, 0.29	0.03	−0.33, −0.02
Death anxiety	–	–	–	–	–	–	0.33 (0.05)	0.00	0.23, 0.43	–	–	–
Death reflection	–	–	–	–	–	–	–	–	–	0.45 (0.07)	0.00	0.31, 0.59
R^2	0.02			0.02			0.18			0.18		
Mediated effects												
Mortality cues grouping → Leader death anxiety → Leader expediency										0.09 (0.04)	0.03	0.01, 0.17
Mortality cues grouping → Leader death reflection → Servant leadership										−0.07 (0.04)	0.04	−0.14, −0.00

Note: Sample size (N) = 235 (High-mortality-cues group = 118; Low-mortality-cues group = 117). Unstandardized coefficients are reported. Mortality cues grouping was coded as 1 = High and 0 = Low.

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increased tendency toward leader expediency behaviour. However, the evidence for Hypothesis 2 was relatively weaker, suggesting the potential influence of a moderating factor in how leaders react to mortality cues. This issue was addressed in Study 2, using a field study to test our hypothesized model in a real-world setting. This approach aims to complement our experimental findings, as evidence from natural settings can enhance the external validity of our conclusions (Aguinis and Bradley, 2014). Specifically, we focused on respondents from the healthcare sector who were on the front line of the fight against COVID-19. The goal was to capture internal mortality cues (Grant and Wade-Benzoni, 2009) or death reminders that originate directly from the work environment (e.g., direct exposure to COVID-19 infection in hospitals). We collected time-lagged (three rounds, one week apart) data from head nurses and their subordinate nurses, reflecting a supervisor-employee dyad. The choice of sample and the challenging healthcare setting provide a rich empirical context to build upon Study 1 and test our hypothesized model.

Participants and procedure. Head nurses and their subordinate nurses were recruited from designated COVID-19 treatment centres in Pakistan. These centres are emergency hospitals set up to supplement the country's COVID-19 response and relieve pressure on other government and private hospitals. During the data collection period, Pakistan had some of the most severe COVID-19 cases in South Asia, with healthcare workers managing a large number of patients in a high-pressure environment. The participating head nurses supervised the work of their subordinate nurses in providing COVID-19 patients with treatment and care, enforcing healthcare protocols, and performing a variety of administrative tasks (e.g., keeping records of COVID-19 death and infection rates). Medical doctors from the research team's wider project on COVID-19 assisted in contacting a random selection of 400 supervisor–subordinate dyads (i.e., head nurses and their subordinate nurses) to participate in the study. Each dyad received a sealed envelope containing an informed consent form and an information sheet outlining the study objectives, as well as clear instructions on how to complete the surveys over a three-week period. Surveys were conducted on the Friday of each week, capturing the participants' full range of experiences for that week. All questionnaires were administered in English, the official language of Pakistani professionals.

At Time 1 (T1), 277 head nurses provided data on mortality cues, PsyCap, demographics, and two personality traits (i.e., neuroticism and conscientiousness). At T2, 233 of the T1 head nurses provided data on death anxiety and death reflection, and at T3, 220 subordinate nurses rated their head nurses' expediency and servant leadership behaviours. After matching data from the three waves, our final sample size comprised 195 leader–subordinate dyads, with a 49 per cent response rate. Approximately 69 per cent of the participants were aged 30 years and above, 85 per cent were women, and 71 per cent had been in employment for up to 10 years.

Measures. For each survey question, respondents were encouraged to consider their experiences during the COVID-19 pandemic.

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Mortality cues. We used the same items from Study 1 but modified them to reflect internal mortality cues within the healthcare context. Sample items include 'I listened or talked to a patient before his/her death' and 'I watched a patient suffer' ($\alpha = 0.90$).

Leader death anxiety ($\alpha = 0.93$), *Leader death reflection* ($\alpha = 0.90$), *Leader expediency* ($\alpha = 0.85$), and *Servant leadership* ($\alpha = 0.84$) were measured using the same set of items from Study 1 adapted to fit the context of Study 2. In contrast to the future-oriented items used in Study 1, subordinates rated their leaders' actual expediency and servant leadership behaviour. A sample item for leader expediency was 'My head nurse cuts corners to complete work assignments more quickly' (Greenbaum et al., 2018), while a sample item for servant leadership was 'My head nurse emphasized the importance of giving back to the community' (Liao et al., 2020).

Leader PsyCap. We used the shortened version of Luthans et al.'s (2007) scale comprising 12 items adapted by Avey et al. (2011). Avey et al. (2011) created a shortened version to address the problem of scale length among leader respondents. The scale includes four items representing hope, three items for efficacy, two items for optimism, and three items for resilience ($\alpha = 0.94$).

Control variables. We controlled for two demographic variables (leader age and working hours) to account for possible confounding effects on the mediators and outcomes. Research has identified these variables as important elements in explicating the attitudes and behaviours of leaders in organizational contexts (e.g., Walter and Scheibe, 2013). In addition, we controlled for neuroticism and conscientiousness given the potential role of personality traits in influencing people's emotions, feelings, behaviours, and overall reactions to psychosocial experiences (Heslin et al., 2019). Thus, neuroticism accounted for respondents' pre-existing experiences of anxiety, worry, and fear, whereas conscientiousness accounted for their pre-existing experiences of thoughtfulness and diligence. Neuroticism ($\alpha = 0.87$) and conscientiousness ($\alpha = 0.86$) were measured using the four-item scale developed by Donnellan et al. (2006). Our results remain consistent with and without these control variables.

Analysis and results. The descriptive statistics and intercorrelations among the study variables are presented in Table III. Prior to testing our hypotheses, we performed a series of CFAs using Mplus. Our hypothesized six-factor model involving mortality cues, leader death anxiety and reflection (five parcels based on its five sub-dimensions), leader expediency, servant leadership, and leader PsyCap (four parcels based on its four sub-dimensions) showed adequate fit to the data ($\chi^2 = 558.75$, df = 449, SRMR =0.05, RMSEA =0.04, CFI =0.97, and TLI =0.97). As expected, this model performed better than all the alternative models.

Hypotheses 1 and 2 were tested concurrently in a single path analysis, following the same indirect effects approach as in Study 1. As shown in Table IV, morality cues were positively associated with leader death anxiety (B = 0.21, SE = 0.06, p = 0.00, CI = [0.09, 0.33]), and the latter was significantly associated with leader expediency (B = 0.21, SE = 0.08, p = 0.01, CI = [0.05, 0.36]). The estimate of the indirect relationship between mortality cues and leader expediency via death anxiety was also

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Table III. *Correlations and descriptive statistics in study 2*

	Mean	*S.D.*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1. Age	2.95	0.94	–									
2. Working hours	46.35	3.11	−0.10	–								
3. Neuroticism	2.41	1.01	−0.05	−0.09	**0.87**							
4. Conscientiousness	2.63	1.06	0.04	0.05	−0.02	**0.86**						
5. Mortality cues	2.91	1.16	−0.03	−0.22**	0.03	−0.08	**0.90**					
6. Leader death anxiety	2.58	1.01	−0.02	−0.15*	0.16*	−0.10	0.26**	**0.93**				
7. Leader death reflection	2.92	0.86	−0.05	−0.17*	−0.05	−0.03	0.21**	0.03	**0.90**			
8. Leader expediency	2.60	1.07	0.04	0.01	−0.05	0.04	0.01	0.18*	−0.15*	**0.85**		
9. Servant leadership	2.90	1.03	0.00	0.04	−0.06	−0.05	0.03	−0.13	0.34**	−0.19*	**0.84**	
10. Leader PsyCap	3.28	1.08	−0.13	−0.15*	0.03	0.02	0.06	−0.11	0.03	0.01	0.14	**0.94**

Note: Sample size (N) = 195 leader-subordinate dyads. Reliability coefficients are displayed in bold on the diagonal.
*p < 0.05; **p < 0.01.

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Table IV. *Results from path analysis in study 2*

	Leader death anxiety			*Leader death reflection*			*Leader expediency*			*Servant leadership*		
	B (SE)	*p*	*95% CI*	*B (SE)*	*p*	*95% CI*	*B (SE)*	*p*	*95% CI*	*B (SE)*	*p*	*95% CI*
Control variables												
Age	−0.00 (0.07)	0.98	−0.15, 0.14	−0.05 (0.06)	0.46	−0.17, 0.08	0.04 (0.08)	0.59	−0.11, 0.20	0.02 (0.07)	0.76	−0.12, 0.17
Working hours	−0.01 (0.0)	0.66	−0.05, 0.03	−0.03 (0.02)	0.08	−0.06, 0.00	0.02 (0.02)	0.34	−0.02, 0.06	0.01 (0.02)	0.58	−0.03, 0.05
Neuroticism	0.15 (0.07)	0.03	0.01, 0.28	−0.06 (0.06)	0.32	−0.18, 0.06	−0.09 (0.08)	0.30	−0.23, 0.07	−0.04 (0.07)	0.57	−0.17, 0.10
Conscientiousness	−0.07 (0.07)	0.28	−0.20, 0.06	−0.01 (0.06)	0.86	−0.12, 0.10	0.06 (0.07)	0.42	−0.08, 0.20	−0.04 (0.07)	0.52	−0.17, 0.09
Study variables												
Mortality cues	0.21 (0.06)	0.00	0.09, 0.33	0.14 (0.05)	0.01	0.04, 0.24	−0.02 (0.07)	0.83	−0.15, 0.12	−0.03 (0.06)	0.58	−0.16, 0.09
Death anxiety	–	–	–	–	–	–	0.21 (0.08)	0.01	0.05, 0.36	–	–	–
Death reflection	–	–	–	–	–	–	–	–	–	0.40 (0.08)	0.00	0.24, 0.56
Interaction	−0.19 (0.05)	0.00	−0.27, −0.10	0.12 (0.05)	0.02	0.02, 0.22	–	–	–	–	–	–
R^2		0.10			0.07			0.04			0.11	
R^2 change		0.03			0.02			0.01			0.01	
Mediated effects												
Mortality cues → Leader death anxiety → Leader expediency										0.04 (0.02)	0.04	0.00, 0.09
Mortality cues → Leader death reflection → Servant leadership										0.06 (0.02)	0.02	0.01, 0.10
Moderated effects												
Mortality cues*Leader PsyCap → Leader death anxiety										−0.19 (0.05)	0.00	−0.27, −0.10
Mortality cues*Leader PsyCap → Leader death reflection										0.12 (0.05)	0.02	0.02, 0.22
Mortality cues*Leader PsyCap → Leader death anxiety → Leader expediency										−0.04 (0.02)	0.03	−0.07, −0.00
Mortality cues*Leader PsyCap → Leader death reflection → Servant leadership										0.05 (0.02)	0.03	0.00, 0.10

Note: Sample size (N) = 195 leader-subordinate dyads. Unstandardized coefficients are reported. R^2 change is based on comparing our main model with an alternative model without control variables.

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significant (ab = 0.04, SE = 0.02, p = 0.04, CI = [0.00, 0.09]). This finding suggests that the experience of death anxiety due to mortality cues promotes leaders' tendency to cut corners and bend performance rules to serve their own purposes (full support for Hypothesis 1).

As shown in Table IV, mortality cues were also positively associated with death reflection (B = 0.14, SE = 0.05, p = 0.01, CI = [0.04, 0.24]), and the latter had a significantly positive relationship with servant leadership (B = 0.40, SE = 0.08, p = 0.00, CI = [0.24, 0.56]). The estimate of the indirect relationship between mortality cues and servant leadership via leader death reflection was also significant (ab = 0.06, SE = 0.02, p = 0.02, CI = [0.01, 0.10]), suggesting that reflective leaders are more likely to prioritize subordinates' interests and assist them in achieving both personal and career-related goals (supporting Hypothesis 2).

Hypotheses 3 and 4 were examined by adding an interaction term between mortality cues and leader PsyCap to the path analysis. We examined a first-stage moderated mediation model, based on Edwards and Lambert (2007). Thus, the magnitudes of the indirect paths from mortality cues to leader expediency (via leader death anxiety) and servant leadership (via leader death reflection) were estimated to be conditional on leader PsyCap.

As shown in Table IV, the estimate of moderated mediation was significant and negative for the hypothesized indirect relationship between mortality cues and leader expediency via leader death anxiety (estimate: −0.04, SE = 0.02, p = 0.03, CI = [−0.07, −0.00]). The precise nature of this moderated mediation effect is depicted in Figure 2, a simple slopes plot showing three conditional values of the moderator: low leader PsyCap (one standard deviation below the mean), medium leader PsyCap (the mean), and high leader PsyCap (one standard deviation above the mean) (Preacher et al., 2003). Thus, among leaders with high PsyCap, exposure to mortality cues was less prominent, resulting in less death anxiety and consequently reduced expediency behaviour (supporting Hypothesis 3). The estimate of moderated mediation was significant and positive for the hypothesized indirect relationship between mortality cues and servant leadership via leader death reflection (estimate: 0.05, SE = 0.02, p = 0.03, CI = [0.00, 0.10]). The simple slopes plot (Figure 3) shows that the indirect impact of mortality cues on servant leadership (via death reflection) was greater among leaders with high PsyCap (supporting Hypothesis 4).

Study 3

The results of Study 2 support our hypotheses that mortality cues can elicit both death anxiety and death reflection in leaders, resulting in an increased tendency for leader expediency and servant leadership, respectively. The analysis also addressed the unequivocal finding in Study 1 concerning the indirect relationship between mortality cues and servant leadership via leader death reflection. Specifically, we highlighted the crucial role of leader PsyCap, proposing that high PsyCap enhances the extent to which mortality cues elicit leader death reflection and, in turn, servant leadership. Consistent with our predictions, the results further demonstrate that leaders with low PsyCap are more likely to experience death anxiety due to mortality cues, ultimately resulting in leader expediency.

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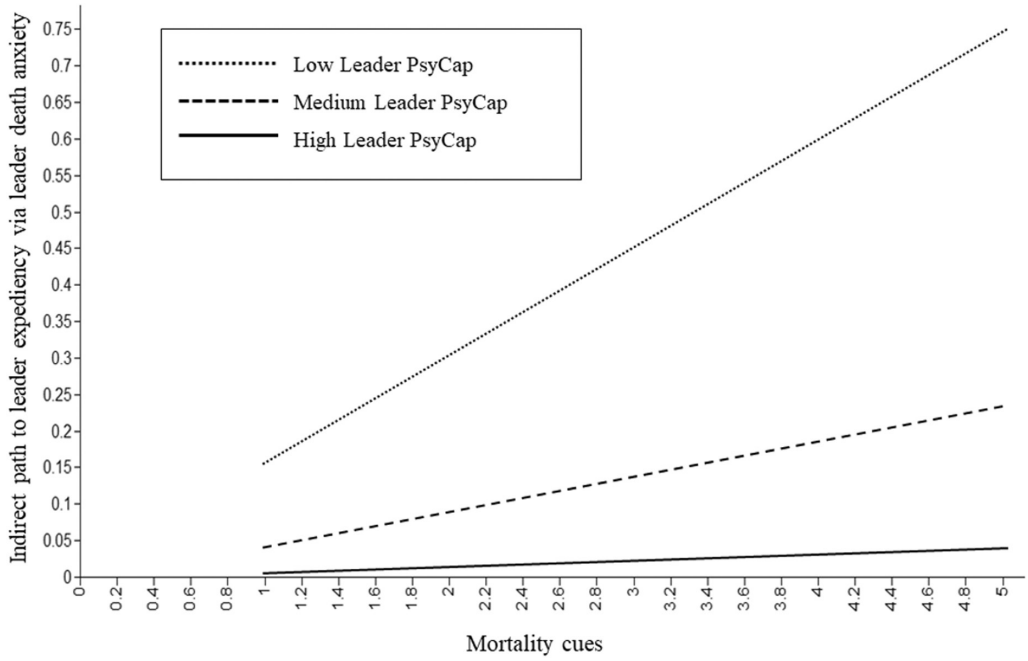

Figure 2. Study 2: Moderated mediated path from mortality cues to leader expediency via leader death anxiety

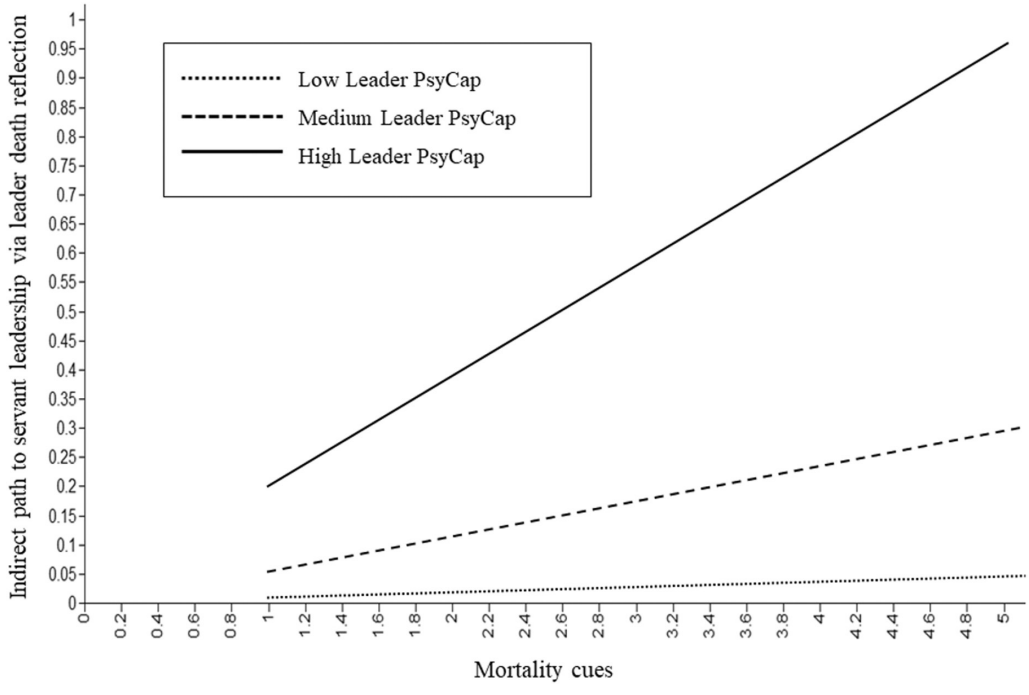

Figure 3. Study 2: Moderated mediated path from mortality cues to servant leadership via leader death reflection

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While Study 2 allowed us to test our hypothesized model on real-life healthcare workers exposed to internal mortality cues, Study 3 focused on external mortality cues or death reminders originating outside the workplace (e.g., daily media updates on COVID-19 deaths and infection rates). In this case, study participants were not on the front lines of the fight against COVID-19. Furthermore, we used daily diary data to capture leaders' momentary experiences and behaviours in the natural flow of everyday life (Nielsen and Cleal, 2011), adding depth to our experimental (Study 1) and time-lagged study designs (Study 2). This is important because mortality cues are generally more dynamic than static (Grant and Wade-Benzoni, 2009) and research shows that leaders' personalities and daily experiences shape their workplace behaviours (e.g., Liao et al., 2018). In this regard, we consider the possibility that leader expediency and servant leadership behaviours may vary daily even as their experiences with mortality cues change.

Participants and procedure. This study included full-time working managers who were alumni of an MBA program at a comprehensive East China university. Project coordinators from the research team's wider academic network contacted these managers. To be eligible for our study, managers were expected to hold leadership positions with significant supervisory responsibility. Due to the Chinese government's strict COVID-19 containment policy (including mandatory lockdowns and rigorous testing at government-supervised facilities), we focused our data collection on leaders who had daily interactions with subordinates (or direct reports), despite working from home. Compared to Study 2, where participants were on the frontline of the fight against COVID-19, Study 3 participants were exposed to external, rather than internal, mortality cues. Daily diary data were collected over a three-week period, lasting 15 consecutive working days, with day 1 used as the baseline. All participants received an invitation package prior to data collection explaining our research objectives and ethics protocols (e.g., data protection and confidentiality). The participants were not financially compensated but were reassured that their participation would help advance research on the COVID-19 pandemic.

A total of 165 managers were invited to participate in this study. At baseline, they provided demographic data and information on their PsyCap, neuroticism, and conscientiousness. Next, they received daily morning and evening surveys sent via WeChat, a social media platform increasingly used for data collection in China (Qin et al., 2020). Morning surveys assessed mortality cues as well as two dimensions of death awareness (i.e., death anxiety and death reflection). These surveys were sent daily at 10 a.m., immediately after news updates on COVID-19 deaths and infection rates. Evening surveys were sent around 6 p.m. to assess leader expediency and servant leadership. We then matched the data from the morning and evening surveys to represent a one-day-level data point (e.g., Ouyang et al., 2019). After data collection, we obtained a final sample of 120 valid day-level observations, comprising 1680 observations (73 per cent response rate, 39 per cent women, approximately 60 per cent aged 35 years and above).

Measures. The surveys were designed in English and translated into Chinese using a back-translation procedure (Brislin, 1986). As in Studies 1 and 2, respondents were encouraged to consider their experiences during the COVID-19 pandemic. We used shortened versions of

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death anxiety, death reflection, and leader PsyCap scales to minimize the response burden on participants and encourage high daily completion rates (Fisher and To, 2012). We also ensured that our shorter measures were clear and concrete and that the target constructs were accurately assessed. All the items were scored on a five-point Likert-type scale.

Mortality cues. We used the same items as in Study 1 but adapted them to reflect external mortality cues in the non-work context. Sample items include 'Today, I got to know about the death of a COVID-19 patient' and 'Today, I got to know about a person suffering from COVID-19' (average coefficient alpha =0.95).

Leader death anxiety. We adapted three items from Thorson and Powell's (1992) shortened nine-item scale to reflect participants' daily experiences, including whether participants felt afraid of getting COVID-19 and were troubled by the subject of life after death (average coefficient alpha =0.98).

Leader death reflection. We adapted one item from each of the five sub-dimensions of Yuan et al.'s (2019) 15-item scale (average coefficient alpha =0.96).

Leader expediency (average coefficient alpha =0.98) and *Servant leadership* (average coefficient alpha =0.97) were measured using the same items from Study 1 and adapted to reflect participants' daily experiences.

Leader PsyCap. We used Avey et al.'s (2011) shortened version of Luthans et al.'s (2007) scale. The same set of items from Study 2 was adapted to reflect participants' daily experiences ($\alpha = 0.95$).

Control variables. We controlled for the same set of variables as in Study 2 and our results remained consistent with or without the control variables.

Analysis and results. Prior to testing our hypotheses, we calculated intraclass correlation coefficients (Bliese, 2000) to verify the degree of relative consistency for daily measures: ICC1 for mortality cues = 0.04, F value = 1.53, p = 0.00; ICC1 for leader death anxiety = 0.03, F value = 1.42, p = 0.00; ICC1 for death reflection = 0.05, F value = 1.66, p = 0.00; ICC1 for leader expediency = 0.10, F value = 2.53, p = 0.00; and ICC1 for servant leadership = 0.06, F value = 1.84, p = 0.00. These estimates provide sufficient justification for multilevel modelling (Bliese, 2000; LeBreton and Senter, 2008). Next, we estimated a series of multilevel CFAs to verify the distinctiveness of the focal variables. Our hypothesized six-factor model involving mortality cues, death anxiety and reflection, leader expediency, servant leadership, and leader PsyCap (four parcels based on its sub-dimensions) showed an adequate fit to the data ($\chi^2 = 838.92$, df = 483, $SRMR_{within} = 0.02$, $SRMR_{between} = 0.08$, RMSEA = 0.02, CFI = 0.99, and TLI = 0.99). All alternative models performed worse than this model.

Given the nested research design (repeated daily data nested within individual leader data), we used random coefficient multilevel modelling (estimation of random intercepts and slopes) in Mplus to simultaneously test Hypotheses 1–4. Our Level 1 predictor (i.e., mortality cues) was centred around each respondent's mean (group-mean centring),

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whereas the Level 2 moderator (leader PsyCap) was grand-mean-centred (Nielsen and Cleal, 2011). This approach eliminates all inter-individual variations from the predictor scores, thereby yielding estimates that reflect only intra-individual variations (Lim et al., 2018). We used the product-of-coefficients ($\alpha\beta$) method and 95% confidence intervals to determine the significance of indirect relationships.

The descriptive statistics and multilevel inter-correlations among the study variables are presented in Table V, and the results of the hypothesized relationships are reported in Table VI. As shown in Table VI, daily mortality cues were significantly and positively associated with daily death anxiety ($\gamma = 0.18$, SE = 0.05, p = 0.00, CI = [0.09, 0.27]) and death reflection ($\gamma = 0.19$, SE = 0.06, p = 0.00, CI = [0.08, 0.31]). Table VI also shows that the estimate of the indirect relationship between mortality cues and leader expediency via leader death anxiety was significant and positive ($\gamma = 0.03$, SE = 0.01, p = 0.00, CI = [0.01, 0.06]). This result complements Studies 1 and 2, suggesting that the experience of death anxiety due to external mortality cues promotes leaders' use of expediency behaviour (supporting Hypothesis 1). Similarly, the estimate of the indirect relationship between mortality cues and servant leadership via leader death reflection was significant and positive ($\gamma = 0.07$, SE = 0.02, p = 0.00, CI = [0.02, 0.11]), thus supporting Hypothesis 2.

The moderated mediation effects in Study 3 revealed patterns that were similar to those in Study 2. Specifically, the index of moderated mediation was significant and negative for the hypothesized indirect relationship between mortality cues and leader expediency via death anxiety (index = −0.07, SE = 0.03, p = 0.04, CI = [−0.13, −0.00]). The simple slopes plot for this relationship (Figure 4) shows that higher levels of leader PsyCap was associated with lower death anxiety and weaker leader expediency (supporting Hypothesis 3). Furthermore, the index of moderated mediation was significant and positive for the hypothesized indirect relationship between mortality cues and servant leadership via leader death reflection (index = 0.11, SE = 0.05, p = 0.02, CI = [0.01, 0.20]). Although the statistical significance of this effect was not particularly strong, as shown in Figure 5, higher leader PsyCap was associated with higher death reflection and stronger servant leadership (supporting Hypothesis 4).

The analysis above provides an important replication of the findings obtained in Study 2, highlighting the experiences of participants from diverse cultural contexts and sectors. The robustness of our findings is further enhanced using a daily diary sampling methodology, which effectively captures the momentary experiences of mortality cues in the natural flow of respondents' everyday lives (Grant and Wade-Benzoni, 2009). In sum, by triangulating the experimental findings of Study 1, the healthcare context of Study 2, and respondents' daily experiences in Study 3, our research provides strong support for our proposed theoretical model.

GENERAL DISCUSSION

This research offered a theory-based test for how and when mortality cues can incite leader expediency and servant leadership behaviour via two distinct psychological mechanisms. We showed that mortality cues increase death anxiety, resulting in expediency behaviours such as cutting corners to satisfy one's personal interests. Mortality

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Table V. *Correlations and descriptive statistics in study 3*

	Mean	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Within-person level												
1. Mortality cues	2.90	0.57	(**0.95**)	0.11**	0.24**	0.12**	0.12**	0.00	0.01	0.03	−0.00	−0.04
2. Leader death anxiety	2.87	0.79	0.11**	(**0.98**)	0.12**	0.29**	0.06*	0.01	−0.09**	−0.01	0.02	−0.04
3. Leader death reflection	2.89	0.60	0.24**	0.12**	(**0.96**)	0.01	0.37**	−0.03	−0.03	−0.01	0.01	0.04
4. Leader expediency	2.86	0.68	0.12**	0.29**	0.01	(**0.98**)	0.00	0.02	−0.03	0.03	−0.00	−0.04
5. Servant leadership	2.85	0.61	0.12**	0.06*	0.37**	0.00	(**0.97**)	−0.03	−0.03	0.02	0.09**	−0.04
Between-person level												
6. Leader PsyCap	3.11	0.62	0.00	0.01	−0.03	0.02	−0.03	**0.95**				
7. Neuroticism	3.06	0.47	0.01	−0.09**	−0.03	−0.03	−0.03	−0.08**	**0.88**			
8. Conscientiousness	3.02	0.55	0.03	−0.01	−0.01	0.02	0.02	0.04	0.43**	**0.91**		
9. Age	1.77	1.11	0.00	0.02	0.01	0.00	0.09**	−0.19**	−0.03	0.02	–	
10. Working hours	1.55	1.10	−0.04	−0.04	0.03	−0.04	−0.04	0.06*	0.04	0.13**	−0.15**	–

Note: Sample size (N) = 120 managers, 1680 observations. Numbers on the lower diagonal are correlations at the within-person level, while numbers in the upper diagonal are correlations at the between-person level. Reliability coefficients are displayed in bold on the diagonal. Average reliability coefficients are displayed in parentheses on the diagonal.
*p < 0.05; **p < 0.01.

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Table VI. *Results from multilevel path analysis in study 3*

	Leader death anxiety			*Leader death reflection*			*Leader expediency*			*Servant leadership*		
	γ (SE)	*p*	*95% CI*	γ (SE)	*p*	*95% CI*	γ (SE)	*p*	*95% CI*	γ (SE)	*p*	*95% CI*
Within-person level												
Mortality cues	0.18 (0.05)	0.00	0.09, 0.27	0.19 (0.06)	0.00	0.08, 0.31	0.10 (0.04)	0.02	0.01, 0.19	0.03 (0.04)	0.43	−0.05, 0.12
Leader death anxiety	–	–		–	–		0.19 (0.05)	0.00	0.10, 0.28	–	–	–
Leader death reflection	–	–		–	–		–	–	–	0.34 (0.05)	0.00	0.23, 0.45
Between-person level												
Intercept	3.25 (0.27)	0.00	2.72, 3.79	3.00 (0.16)	0.00	2.68, 3.32	1.91 (0.39)	0.00	1.13, 2.68	1.04 (0.44)	0.02	0.17, 1.91
Leader PsyCap	0.01 (0.08)	0.92	−0.16, 0.18	−0.03 (0.03)	0.28	−0.08, 0.02	–	–	–	–	–	–
Interaction	−0.20 (0.06)	0.00	−0.32, −0.09	0.18 (0.06)	0.00	0.05, 0.31	–	–	–	–	–	–
Age	−0.00 (0.04)	0.91	−0.08, 0.07	0.00 (0.02)	0.88	−0.04, 0.05	−0.01 (0.03)	0.61	−0.07, 0.04	0.04 (0.02)	0.01	0.01, 0.07
Working hours	−0.04 (0.03)	0.29	−0.10, 0.03	0.02 (0.02)	0.25	−0.02, 0.07	−0.02 (0.03)	0.44	−0.07, 0.03	−0.03 (0.04)	0.06	−0.06, 0.00
Neuroticism	−0.17 (0.10)	0.11	−0.37, 0.04	−0.05 (0.04)	0.27	−0.13, 0.04	−0.01 (0.09)	0.87	−0.18, 0.16	−0.03 (0.04)	0.45	−0.12, 0.05
Conscientiousness	0.06 (0.07)	0.37	−0.07, 0.20	0.00 (0.05)	0.99	−0.09, 0.09	0.04 (0.07)	0.50	−0.08, 0.17	0.05 (0.03)	0.18	−0.02, 0.12
Mediated effects												
Mortality cues → Leader death anxiety → Leader expediency										0.03 (0.01)	0.00	0.01, 0.06
Mortality cues → Leader death reflection → Servant leadership										0.07 (0.02)	0.00	0.02, 0.11
Moderated mediation effects												
Mortality cues*Leader PsyCap → Leader death anxiety → Leader expediency										−0.07 (0.03)	0.04	−0.13, −0.00
Mortality cues*Leader PsyCap → Leader death reflection → Servant leadership										0.11 (0.05)	0.02	0.01, 0.20

Note: Sample size (N) = 120 managers, 1680 observations. Unstandardized coefficients are reported.

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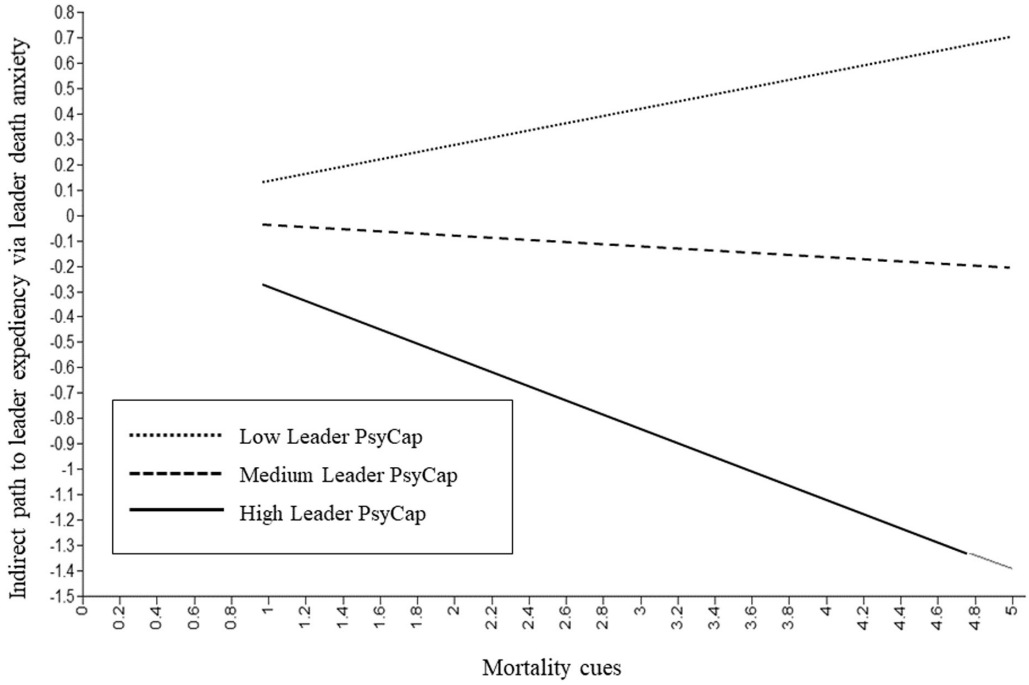

Figure 4. Study 3: Moderated mediated path from mortality cues to leader expediency via leader death anxiety

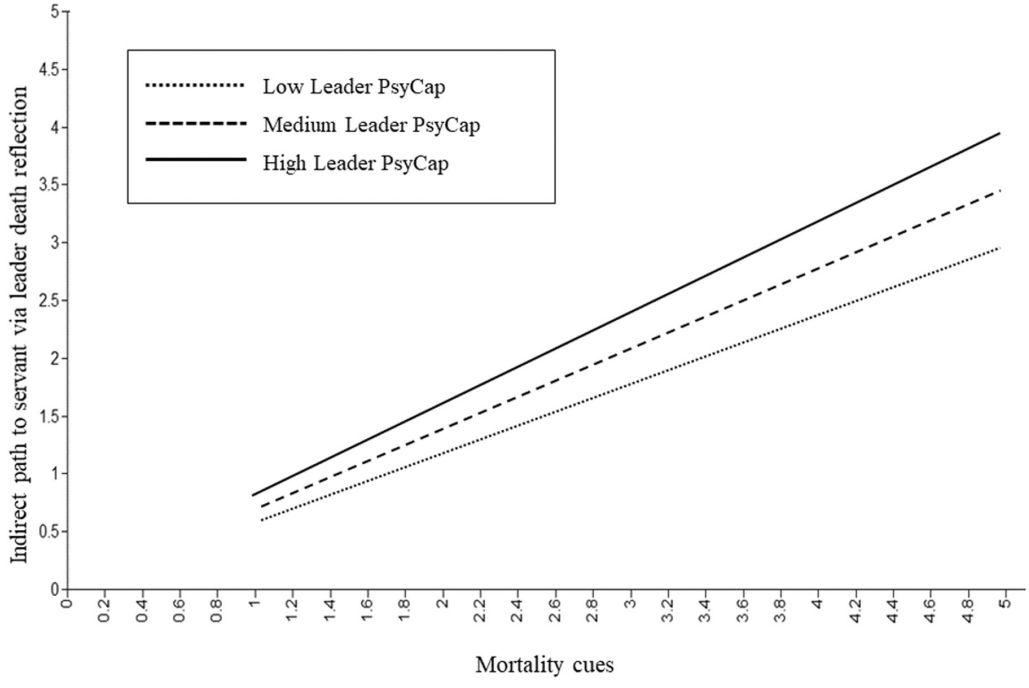

Figure 5. Study 3: Moderated mediated path from mortality cues to servant leadership via leader death reflection

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cues may also provide opportunities for a more rational, thoughtful, and deliberative response to mortality cues, which ultimately promotes servant leadership behaviour. Our analysis further revealed that, when faced with mortality cues, leaders with high (vs. low) PsyCap were less likely to engage in expediency behaviour and more likely to demonstrate servant leadership. These findings were generally consistent across our different samples from the UK, Pakistan, and China, indicating that our research has strong external validity (Tsang and Kwan, 1999). Although we did not specifically predict social and cultural differences, our findings highlight the apparent multicultural nature of leaders' psychological and behavioural reactions to the COVID-19 pandemic. Below, we discuss the theoretical and practical implications of our research and offer suggestions for future research.

Theoretical Implications

Our research advances the understanding of mortality salience and its consequences in organizational contexts. First, we advance the existing body of knowledge by adopting a leader-centric approach and demonstrating how leaders react emotionally and cognitively when faced with mortality cues. While past research has acknowledged the symbolic role of leaders in supporting employees during uncertain times, we lack in-depth insights into how leaders might react in situations where mortality cues are most salient. Our focus on leadership outcomes adds a new dimension to the topic of mortality salience, thereby responding to calls for a more nuanced perspective on the organizational consequences of death awareness (Stein and Cropanzano, 2011; Grant and Wade-Benzoni, 2009). Using CMDA as a theoretical framework, our findings suggest that leaders confronted with mortality cues may experience fear of death and ultimately react in ways that violate moral norms (i.e., leader expediency). At the same time, mortality cues can elicit positive reactions in leaders, such as being more reflective of their experiences and prioritizing the interests of others (i.e., servant leadership). In this context, our study extends previous research that focused primarily on employee outcomes (e.g., Hu et al., 2020; Sliter et al., 2014; Yuan et al., 2019), paving the way for future research on how mortality cues can influence the behaviours and actions of leaders in organizations.

We advance current understanding by reconciling the emotional and cognitive psychological mechanisms of death awareness (i.e., death anxiety and death reflection, respectively). To date, most research on death awareness has concentrated on death anxiety or the emotional response to mortality cues (e.g., Hu et al., 2020), while ignoring death reflection or the cognitive response (Yuan et al., 2019). Although these emotional and cognitive mechanisms have been studied separately in previous works, the theory suggests that they can occur simultaneously as a response to mortality cues (Grant and Wade-Benzoni, 2009). We confirmed this empirically using the COVID-19 pandemic as a practical referent, thereby consolidating knowledge on death awareness and providing organizations with the requisite knowledge to better support their leaders and employees during difficult times. In this regard, our research provides one of the first comprehensive assessments of the distinct psychological pathways through

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which mortality cues can influence positive and negative leadership outcomes in organizations.

Furthermore, by identifying and analysing a positive personal resource as the boundary condition for mortality cues, our study contributes a resource-based perspective to CMDA. While CMDA (Grant and Wade-Benzoni, 2009) and broader literature on mortality salience (e.g., Belmi and Pfeffer, 2016; Lykins et al., 2007) have emphasized the importance of personal characteristics in assessing individuals' responses to mortality cues, empirical confirmation of these effects is lacking, particularly for leaders facing death-related stimuli. In this regard, we examined whether leader PsyCap moderated the effects of mortality cues on death anxiety and death reflection. The findings showed that leaders with low PsyCap were more likely to react emotionally and impulsively when confronted with mortality cues. They are subjected to an emotional state of death anxiety, which may lead them to violate moral standards under the guise of performing their jobs effectively (e.g., leader expediency). In contrast, leaders with high PsyCap are better equipped to respond more rationally to mortality cues, which promotes the cognitive state of death reflection and increases servant leadership behaviour. The underlying premise is that people with high levels of PsyCap are more confident, hopeful, optimistic, and resilient in the face of adversity (Luthans and Youssef-Morgan, 2017). Therefore, leader PsyCap can be seen as a key personal resource for mitigating the negative effects of mortality cues and amplifying their potential benefits.

Practical Implications

Our findings have important practical implications for helping organizations improve leadership behaviours in the face of mortality cues. Along this line, our research can assist leaders and managers in responding more adaptively to the range of possible effects associated with mortality cues – some dysfunctional (e.g., leader expediency) and others beneficial (e.g., servant leadership). Based on our findings, we encourage organizations to have candid workplace conversations about the topic of death (or the process of death) and how they can affect people's personal and professional lives. These conversations are crucial, especially in the post-COVID-19 era, as mortality cues remain prominent in various spheres of life (e.g., the death of a co-worker, friend or relative; Grant and Wade-Benzoni, 2009; Yuan et al., 2019). By reconciling pleasant and unpleasant truths about human mortality and making these truths a relevant topic for discussion in the work environment, organizational members benefit from being more reflective when confronted with reminders of death. Indeed, our analysis found that death reflection has measurable benefits in terms of leaders' willingness to serve others, which is an important contributor to organizational performance (Hoch et al., 2018). Therefore, an important policy implication is that key elements of death reflection (e.g., thoughtfulness, deliberative reasoning, and altruism) should be incorporated into leaders' learning evaluations and performance management assessments. This will not only enhance leaders' cognitive skills but also help in identifying key areas for personal and professional development.

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Beyond providing new insights into leaders' reactions to mortality cues, our study highlights the critical role of PsyCap in how leaders evaluate life-threatening events. Considering our findings that PsyCap interacts with mortality cues by reducing the impact of mortality cues on death anxiety (an emotional state), while enhancing the impact on death reflection (a cognitive state), it is crucial for organizations to implement skill-enhancement initiatives aimed at bolstering leader PsyCap. This is essential for mitigating the negative effects of mortality cues in life-threatening circumstances. Such initiatives can include resilience training programmes to improve leaders' self-confidence and capacity to recover from adversity or hardship. These assertions are consistent with research suggesting that well-designed PsyCap interventions can improve people's morale and ability to cope more effectively with traumatic events (Luthans and Youssef-Morgan, 2017). Moreover, mindfulness programmes can be provided to support leaders and improve their PsyCap.

Limitations and Future Research

The strength of our study comes from using three distinct data samples to simultaneously explore both the negative and positive aspects of leaders' responses to mortality cues. In doing so, we make important theoretical and practical contributions to the literature on mortality salience by bringing the organizational perspective into sharper focus. Nevertheless, our research has some limitations. In Study 1, for example, our experimental design enabled us to provide a more rigorous test for the causal direction of our hypothesized relationships; however, the study was conducted using hypothetical scenarios, with leadership outcomes measured in terms of leaders' behavioural intentions rather than actual behaviours. This limitation was partly addressed in Studies 2 and 3, using actual leader behaviours and data from two different organizational contexts and analytical techniques. Specifically, Study 2 used ratings of leader behaviour rated by subordinates, whereas Study 3 assessed leaders' daily experiences and behavioural responses to mortality cues. However, the difficulty in establishing causality remains a significant threat to any survey-based investigation (Podsakoff et al., 2012).

In contrast to Study 2, which used time-lagged data from leader–subordinate dyads, Study 3 relied solely on self-reported daily diary data. Although it is reasonable for leaders to provide information about their own daily experiences, self-reported data are susceptible to respondent bias. Addressing this limitation, we followed Podsakoff et al.'s (2012) methodological recommendations by controlling for leader personality traits (i.e., neuroticism and conscientiousness). Moreover, previous research has shown that data regarding self-reported leadership behaviours tend to produce results similar to data from other-reported measures (e.g., Lin et al., 2016). As a result, we did not expect any major inconsistencies in interpreting Study 3 findings. Nonetheless, we propose that future research should incorporate additional methodologies (e.g., qualitative research methods) to provide a more nuanced assessment of leaders' reactions to mortality cues.

Another potential limitation of our research is that we only examined two specific leadership outcomes, leader expediency and servant leadership, overlooking a variety of other

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leadership behaviours documented in the broader literature, as well as the behaviours associated with 'hot' self-protective motivation described in CMDA (e.g., stress-induced withdrawal behaviours). While our inclusion of leader expediency and servant leadership represents a meaningful extension of the Grant and Wade-Benzoni's (2009) CMDA framework, future research would benefit from examining additional leader behaviours, such as withdrawal behaviours, abusive supervision, and empowering leadership. For example, it would be worthwhile to understand whether mortality cues can influence leader withdrawal behaviours and abusive supervision through death anxiety, or empowering leadership through death reflection. By incorporating these behaviours into future research, we can ascertain whether the effects of mortality cues extend beyond the leadership outcomes reported in our study. Furthermore, we urge future research to explore the potential negative and positive ramifications of mortality cues in a broader range of organizational practices, including pro-environmental initiatives, corporate social responsibility, and other socially responsible behaviours.

CONCLUSION

Our research has uncovered the intricate nature of mortality cues for leaders, highlighting their potential to both harm and benefit organizations. As leaders navigate the challenging path toward full recovery from the mortality cues associated with the COVID-19 pandemic and beyond (i.e., death of a co-worker, friend, relative, or death from roadside accidents), they must recognize that these cues can trigger contrasting outcomes for organizations, including leader expediency via death anxiety and servant leadership behaviour via death reflection. Furthermore, our study demonstrated the moderating role of leaders' PsyCap – a higher-level psychological resource comprising resilience, hope, optimism, and self-efficacy (Luthans et al., 2007) – in shaping how leaders respond to mortality cues. Specifically, PsyCap reduces the extent to which mortality cues elicit death anxiety and, ultimately, leader expediency, while concurrently strengthening death reflection, which encourages servant leadership. We hope these findings will catalyse future investigations into the impact of mortality cues within the organizational realm, acknowledging their continual presence before and after the pandemic (Stein and Cropanzano, 2011).

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