

# Leaders in the pandemic: Contributions to the literature on leadership in organizations in extreme contexts



## Líderes na pandemia: Contribuições para a literatura sobre liderança nas organizações em contextos extremos

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## Abstract

**Purpose:** The Covid-19 pandemic triggered a crisis and required measures such as social distancing that have challenged the effectiveness of leadership theories and led some authors to suggest that the practice and theory of leadership are now standing at a crossroads. As the pandemic's critical phase subsides and in-person activities gradually resume, this study seeks to understand how leaders faced the Covid-19 crisis and the results achieved for organizations and people.

**Originality/value:** This work proposes a theoretical model to contribute to the literature about leadership in extreme events. We expand the model by Hannah et al. (2009) to cover elements not yet studied, considering a global, long-duration, and extreme context for which there was no previous training.

**Design/methodology/approach:** This is a theoretical article based on the model of Hannah et al. (2009) on leadership in extreme events. The study proposes a model for leadership in extreme events by examining empirical articles on leadership during the pandemic from March 2020 to December 2022.

**Findings:** Several leadership styles were adopted during the pandemic. However, almost all converged on mitigating the pandemic's impact on employees, especially their emotional and psychological well-being, which was significantly affected by the threats posed by Covid-19. The study found that leaders may amplify adverse effects when communication is not clear and transparent and when business needs are prioritized over the needs of employees.

**Keywords:** leadership, Covid-19, pandemic, leadership theories, leadership in extreme events

## Resumo

**Objetivo:** A crise causada pela pandemia da Covid-19 colocou em questão a efetividade das teorias sobre liderança desenvolvidas até o momento, tendo alguns autores argumentado que há uma crise da prática e da teoria sobre liderança. Em um contexto em que as atividades presenciais foram retomadas, o presente trabalho busca entender como a liderança enfrentou a pandemia e os resultados obtidos para organizações e pessoas.

**Originalidade/valor:** Este trabalho propõe um modelo teórico que avança na literatura sobre liderança em eventos extremos, expandindo o modelo de Hannah et al. (2009), na medida em que contempla contexto e evento extremos de longa duração, global e em que não pôde haver preparação prévia, o que não havia sido estudado até o momento.

**Design/metodologia/abordagem:** Trata-se de um trabalho teórico que, com base no modelo de Hannah et al. (2009) sobre a liderança em eventos extremos e na publicação de artigos empíricos sobre a liderança na pandemia de março de 2020 a dezembro de 2022, propõe um modelo para a liderança em contextos extremos.

**Resultados:** Diversos estilos de liderança foram adotados na pandemia, mas quase todos convergiram para o papel de atenuar os efeitos da pandemia nos trabalhadores, especialmente no que diz respeito aos aspectos emocionais e psicológicos, tão impactados pelo grau de ameaça da pandemia. A liderança também pode ser um estressor quando não estabelece comunicação clara e transparente e quando prioriza as necessidades do negócio e não as pessoas.

**Palavras-chave:** liderança, Covid-19, pandemia, teorias sobre liderança, liderança em eventos extremos

## INTRODUCTION

Leadership is a vast and fragmented topic that has been studied for a long time, resulting in the development of around 66 theories (Dihn et al., 2014; Mango, 2018; Meuser et al., 2016; Sant’Anna & Nelson, 2015). However, the impact of Covid-19 on society has raised doubts about the efficacy of these theories, as they provided limited assistance in comprehending and generating positive outcomes in the daily experiences shaped by the pandemic. Additionally, crisis management theories did not fully explain the unfolding phenomena, given the distinctive characteristics of this period, such as uncertainty and high risk, the pandemic’s prolonged duration, and the need for unprecedented responses (Tourish, 2020). Although the world has experienced pandemics before, Covid-19 was the first “where millions of organizations, large and small, in scores of countries, have suspended normal operations” (Lee, Lampel et al., 2020, p. 1038). Leaders play a fundamental role in reacting and leading organizations in a crisis.

The first news about the coronavirus came from China at the end of 2019. Within a few months, cases spread worldwide, leading, in mid-March 2020, to the declaration of a pandemic by the World Health Organization (WHO). The pandemic disrupted all sectors of the market, whether due to the drastic change in how organizations operate, in which work went from face-to-face to online, or due to the total stoppage of activities, as with tourism, personal care, and other industries (Bartsch et al., 2020). Since no prior preparation was possible, leaders were expected to guide people safely through the crisis and post-pandemic reconstruction (Lee, 2020). For Blake-Beard et al. (2020, p. 1), “the behaviors that leaders adopt in handling this pandemic are essential to the survival of our communities and society,” *i.e.*, in times of severe crisis, people expect leaders to centralize authority, make decisions, and plan actions (Hannah et al., 2009).

The academic literature on leadership had not anticipated a context like the one posed by the Covid-19 pandemic. The model put forth by Hannah et al. (2009) has garnered the highest citation count (Web of Science, 2023) and has been vital to investigating leadership within extreme contexts (Geier, 2016; Hannah & Parry, 2014; Oliveira et al., 2023). However, the pandemic introduced distinctive conditions – such as its global reach, prolonged duration, and the impossibility of prior training – that diverge from the contexts examined in other studies utilizing the same model. As the pandemic’s critical phase subsides and in-person activities resume, this study asks:



- How did organizational leaders approach the challenges posed by the Covid-19 pandemic, and what were the outcomes for individuals and organizations?

The research analyzes empirical articles on leadership in the pandemic published from March 2020 to December 2022. The intention is to expand the model of Hannah et al. (2009) to encompass extreme contexts with the characteristics observed in the pandemic: global reach, prolonged duration, and the impossibility of prior training.

The theoretical model elucidates the dimensions outlined by Hanna et al. (2009), including location in time, probability and magnitude of consequences, and the various types of stressors placed on organizations and people. The model differs from the previous one in the leaders' role, especially by considering the direct leadership of workers. Based on leadership experiences during the Covid-19 pandemic, the model proposes that leaders mitigate the difficulties by providing workers with material, psychological, and emotional resources. The leaders' approach led to outcomes such as reduced anxiety and stress and improved resilience. Leaders have also produced adverse effects when they fail to establish clear and transparent communication and when the business needs are prioritized over the needs of employees.

## THEORETICAL FRAMEWORK

Literature reviews on leadership have organized and integrated numerous and diverse theories to facilitate research on the issue (Dihn et al., 2014; Hernandez et al., 2011; Mango, 2018; Meuser et al., 2016; Turano & Cavazotte, 2016). Although studies have used different criteria to categorize and analyze the theories, clustering in broad themes is a frequent practice either in research designed to explore the development of the issue through history (Turano & Cavazotte, 2016) or to produce a synthesis for analysis (Dihn et al., 2014; Hernandez et al., 2011). These literature reviews indicate a predominance of studies based on charismatic, transformational, transactional, and relational theories, as well as the traits theory. These research works also point to an increase in recent production emphasizing theories of environmental complexity and information processing. Furthermore, most studies are analytical (Dihn et al., 2014; Sant'Anna & Nelson, 2015) and generally focus on the leaders, their characteristics, what they do, and their roles and responsibilities, emphasizing leaders in strategic and executive positions. A



growing number of works focus on leaders and followers, the relationships and processes involved, and analysis at the level of the organization, groups, or individuals (Dihn et al., 2014).

Crisis leadership is defined as “the influencing process that occurs between a leader and stakeholders (internal and external) in the context of organizational crises, as opposed to run-of-the-mill business challenges, over the various stages of the crisis lifecycles” (Collins et al., 2022, p. 2). Collins et al. (2022) found four types of crisis leadership: 1. the shepherd who guides their people, keeping them safe in the case of external and unintentional crises caused by (unintentional) human actions or natural disasters; 2. the saint leader emerges in crises provoked by external and intentional events such as wars or terrorist acts; 3. the spokesperson is the leader for when the crisis is internal and unintentional, such as when a product causes harm and puts the organization’s reputation at risk; and finally 4. the sinners, when the crisis is provoked internally and intentionally. The Covid-19 pandemic was a crisis for shepherd leaders, who should safely guide people and the organization, minimizing damage and helping recovery.

The review by Bundy et al. (2017, p. 1670) recalls that the classic engineering mandate, “identify and fix the problems,” still prevails.” The authors also point out that this literature is scarce, focusing on how the leader perceives the crisis: as a threat, which could bring more emotional and limited reactions in its scope, or as an opportunity, with a more open mind and flexibility. Characteristics such as charisma would also help bring teams together. Factors such as the board’s and the CEO’s quality seem relevant, but they can get contradictory results. Therefore, the literature on leadership in extreme contexts brings further elements to analyzing the management situation during the pandemic.

## Leadership in extreme contexts

According to Geier (2016), little is known about the leaders’ behavior in extreme conditions, not least because of the inherent difficulty in collecting data during a fire, war, or terrorist attack, for example. Thus, studies have used secondary sources on leadership in events (Burke et al., 2018; Stoker et al., 2019) or, in primary data collection, resort to critical incidents so that respondents remember their perceptions during the events (Geier, 2016). Research on the leadership styles adopted in these conditions has shown contradictory results, and both directive and participatory styles were found (Baran & Scott, 2010; Stoker et al., 2019).

Burke et al. (2018) studied team leadership in extreme contexts, such as polar expeditions, space travel, and long-term sailing competitions (up to nine months). They propose, based on Morgeson et al. (2010), different functions for leaders according to two phases: 1. transition phase, in which it is necessary to form the team, ensuring an adequate composition of participants; define the team's mission according to the organization's expectations; establish the team and individual goals; structure and plan how the actions will be developed; train and develop people so that they can fulfill the actions; and give meaning to the event that will impact the team; 2. action phase, where it is necessary to give feedback to the participants; monitor the team concerning the intended objectives; manage team boundaries, bringing relevant information and protecting members from unnecessary external pressure; challenge people to think "outside the box" in search of solutions; provide the necessary resources; encourage the team to have autonomy; and provide emotional support. Burke et al. (2018) found that the most important functions in extreme situations were emotional support, helping to solve problems, structuring and planning actions, giving meaning to participants, and monitoring performance. They also found leadership tends to be centralized in one person instead of distributed.

Hannah et al. (2009, p. 897) propose a model for leadership in extreme contexts, arguing that this "may be one of the least researched areas in the leadership field". The authors suggest that leadership has to be studied in this specific context, defining extreme context as

[...] an environment where one or more extreme events are occurring or are likely to occur that may exceed the organization's capacity to prevent and result in an extensive and intolerable magnitude of physical, psychological, or material consequences to – or in close physical or psycho-social proximity to – organization members (Hannah et al., 2009, p. 898).

An event is defined as extreme when it has

[...] potential for massive physical, psychological, or material consequences [...] to organization members, [...] the consequences of which are thought unbearable by those organization members, and [...] are such that they may exceed the organization's capacity to prevent those extreme events (Hannah et al., 2009, pp. 897–898).

The model foresees characteristics of the extreme event, such as: 1. location in time – the degree of variation in the severity of the context during

and after the event, in which the leader can prepare the team for the possibility of the crisis occurring and make decisions to mitigate the risks, as well as manage the post-event; 2. magnitude and consequences of the threat being faced, which can be measured by the extent and severity of potential damage, which requires leaders capable of making decisions that are more appropriate to the specific context and influences the willingness of organizations to overcome resistance and provide resources to mitigate negative effects; 3. physical or psycho-social proximity, which can facilitate observation and interaction, which leads to greater levels of cohesion and trust between leaders and followers during the event; and 4. form of the threat, which can be physical (risk of death, physical sequelae), psychological (stress, burnout), or material (such as loss of job, income, material damage), and will determine different modes of action by the leader. These elements determine the event's extremity level and, consequently, the adaptive leadership response.

The model also foresees attenuators and stressors in the context and the organization. The organization can mitigate the harmful effects of events by providing different types of resources, which can be material, such as technological support, or aimed at improving people's psychological and emotional conditions, such as the skills needed to adapt to the new scenario and psychoemotional support. Stressors require an adaptive response from both organizations and employees (Gray et al., 2023) and include external aspects, such as the duration of the event, unpredictability, and constant changes in context, and internal, such as the conflicts that may arise about the decision making, the difficulty of dealing with technology, the lack of financial resources, among others (Hannah et al., 2009). Thus, the model by Hannah et al. (2009) was chosen to support the study, as it is specific to the context of extreme events.

Hannah and Parry (2014) add that research on leadership in extreme contexts needs to clearly explain the internal – the organization and its resources and people – and external context – the environment and the main stakeholders. The authors point to a tendency toward more directive, transactional, task-oriented, administrative, and even authoritarian action on the part of leadership when there is a serious threat to the organization and its members, given the need for quick and assertive decision-making. It is also important that the leader exercises sensemaking of the event because, as in Weick (1993), as unforeseen and threatening situations occur, people need to assemble a mental map of the situation to design and evaluate the realistic possibilities that present themselves. Hannah and Parry (2014, p. 906) state that “fear and other forms of stress in turn can evoke deep self-reflection



[...], which, depending on factors such as levels of self-efficacy or resilience, can be either facilitative or debilitating [...] when action is needed.” In turn, followers tend to accept this form of leadership when there is trust, cohesion, identification, and commitment to the leader and the group, which reduces the anxiety and stress caused by the event. The authors point out that each extreme situation is unique. When the threat is more significant to psychological well-being, effective leadership should be directed toward helping followers adapt to the problem. Leaders can become more open to suggestions from followers and how to communicate and explain the decisions, adopting a more participative leadership style.

## METHODOLOGY

The research question was addressed by reviewing 16 empirical articles on leadership and Covid-19, written in English and published between January 2021 and December 2022. The articles were selected from a sample of 630 studies from the Scopus database and 1,677 from the Web of Science database. The search string used to gather the articles was “leadership” AND “pandemic” OR “covid 19” OR “coronavirus,” applied in both databases. The period established for the search was March 2020 to December 2022. Our preliminary exploration conducted in February 2021 under the same parameters revealed no empirical articles published from March 2020 to December 2020. The final compilation of chosen articles showcased two studies published in 2023, although our scope was confined to those published by 2022. This discrepancy occurred due to their availability in the databases as preprints. The initial criterion for article selection was the ABS classification. Following Collins et al. (2022), only articles classified as ABS 3, 4, and 4\* were selected, resulting in 410 articles. Subsequent assessment of titles, abstracts, and keywords led to identifying 18 empirical articles aligning with the research theme. These articles were downloaded, read in full, and evaluated. Of the 18, two articles were excluded as they did not align with the research theme as initially deduced from the abstracts. The remaining 16 articles were then categorized according to the research scope.

The analysis unveiled two types of empirical articles: 1. those rooted in specific theories that explored the correlation between leadership styles and their effects on individuals and organizations – encompassing factors like anxiety, stress, burnout, the perception of insecurity, and commitment; and 2. articles describing characteristics or practices of leaders during the pandemic and their effects on individuals and organizations. Ten articles

were classified in the first type. They were grounded on leadership theories – transformational, directive, servant, ethical, resonant, leader-member exchange (LMX), and emotional leadership – and typically adopted a quantitative approach. Among the six articles classified in the second type, three employed a qualitative approach, two were quantitative studies, and one adopted a mixed approach. Table 1 details the articles.

**Table 1**  
*Details of the articles analyzed*

Authors	Location	Industry/Sector	Methodological approach and respondents
*Garretsen et al. (2022)	48 countries	Profit and non-profit organizations	Quantitative research: 27,000 managers from 619 organizations in 48 countries and 32 industries
Gray et al. (2023)	United States	University and professionals (nurses and engineers)	Qualitative: online research with 571 respondents Quantitative: research with 401 licensed respondents
Hadjielias et al. (2022)	Cyprus	Small companies	Qualitative: longitudinal study (two sessions) with 35 small business owner-managers
Howe-Walsh et al. (2022)	Nigeria	SME hotels	Qualitative: 42 semi-structured interviews with SME hotel owners, self-initiated expatriate talent, and local workers in Nigerian hotels
*Kloutsiniotis et al. (2022)	Greece	Hotels (four or five stars)	Quantitative: online research with 459 Greek "customer-contact employees"
*Krause et al. (2022)	United States	US public firms	Quantitative: online research with 120 directors of US public firms
*Lee et al. (2022)	South Korea	Service industry: retail stores, banking and financial services, restaurants, and hospitality/tourism	Quantitative: research with 135 frontline service employees in two stages
*Liu et al. (2022)	United States	Higher education institutions	Qualitative: 55 in-depth interviews with leaders of 30 HEI
Matthews et al. (2022)	United States	Education	Quantitative: online research (nine waves of data) with 617 K-12 teachers
*Nguyen et al. (2022)	Vietnam	Employees who worked during the pandemic	Quantitative: survey with 281 respondents

(continues)

**Table 1 (conclusion)**

*Details of the articles analyzed*

Authors	Location	Industry/Sector	Methodological approach and respondents
*Ramaswamy et al. (2022)	India	Healthcare	Quantitative: research with 415 nurses
*Ramli et al. (2023)	United Kingdom	High-growth firms in the digital, advanced manufacturing, green industries, and business service sectors	Qualitative: 173 longitudinal interviews with 57 entrepreneurs of high-growth firms during the Covid-19 crisis
*Ruiz-Palomino et al. (2022)	Spain	Hospitality (hotels)	Quantitative: online research with 205 hotel employees
*Tuan (2022)	Vietnam	Manufacturing	Quantitative: longitudinal research with three waves of data, with 418 salespersons from 36 manufacturing firms
Wang et al. (2022)	China	Pre-school education	Quantitative: longitudinal field experiment with 251 education employees in 12 schools in eight cities and six provinces
Yeo (2021)	No information	Multinational company	Qualitative: data collection through interviews, observation, and participation based on direct interaction with leaders and employees

Note. \* Type 1.

As shown in Table 1, the studies were carried out in different regions, such as North America, Europe, and Asia, with only one in Africa and none in Latin America. Most studies collected data from August to December 2020. They examined different industries that suffered a variety of impacts during the pandemic: some of them had to maintain in-person services (e.g., banking and financial services and healthcare), others practically paralyzed activities (hospitality), while certain industries transitioned to online or hybrid modes (as observed in educational institutions). The articles were analyzed within the framework proposed by Hannah et al. (2009), exploring the dimensions the authors outlined while discerning potential nuances of leadership within the context of the Covid-19 pandemic. Finally, we formulated and proposed a leadership model tailored for organizational settings, considering the lessons learned from the pandemic.

## RESULTS ANALYSIS

The analysis of empirical articles on leadership during the pandemic identified two types of articles: type 1, based on specific leadership theory, and type 2, which investigated leadership characteristics or practices.

Table 2 summarizes the theories that underlie the type 1 studies and the leadership characteristics found that led to positive results for organizations and workers:

**Table 2**  
*Leadership theories in articles classified as type 1*

Leadership theories	Leader characteristics	Impacts
Directive (Garretsen et al., 2022; Krause et al., 2022)	Directive leadership was observed more often at the beginning of the pandemic, transitioning to more participatory practices with time.	Leads to better strategic planning to face the pandemic.
Ethical (Lee et al., 2022; Liu et al., 2022)	Promotes reciprocal communication and offers an example of conduct. It encompasses attention and care for others. The theory is concerned with accuracy, transparency, fairness, and accountability. Security is a priority.	Reduces the perception of insecurity and disengagement. It helps to face the context volatility.
Transformational (Nguyen et al., 2022; Kloutsiniotis et al., 2022)	Offers resources and shows the purpose of the work, inspires people; study highlights the essential role of line managers.	Reduces role conflict, job insecurity, and cynicism; reduces stress and anxiety about financial problems, isolation effects, and burnout.
Resonant (Ramaswamy et al., 2022)	Empowers team members by promoting confidence in performance, compassion, and empathy.	Promotes positive emotions, increases self-efficacy, resilience, sense of belonging and commitment, and reduces anxiety and depression.
Emotional (Ramli et al., 2023)	Cares about mental and economic well-being and prioritizes supporting employees' mental and physical well-being. Its strategic approach prioritizes the company's financial security, cutting costs and ensuring positive cash flow.	Maximizes organizational resilience (the ability of workers to respond to sudden changes brought about by a crisis), avoids burnout, and maintains mental well-being.

*(continues)*

**Table 2 (conclusion)***Leadership theories in articles classified as type 1*

Leadership theories	Leader characteristics	Impacts
Servant (Ruiz-Palomino et al., 2022)	Is concerned and willing to sacrifice for others. Promotes confidence rather than insecurity and fosters honesty. It is a leadership moved by a higher calling, focusing on people's development. The study highlights the crucial role of the immediate superior.	Increases individual social capital that reduces depression and contributes to adaptation.
LMX (Tuan, 2022)	Establishes high-quality relationships with subordinates. Communicates clearly and transparently the policies related to the crisis. Develops a close connection with the followers and support their work.	More resilience and a positive mindset when it comes to stress. It facilitates the development of other resources such as perseverance, constructive thinking, flexibility, and adaptability to the crisis.

As shown in Table 2, several theories were used to support these studies, with a more significant number exploring directive, transformational, and ethical leadership. Despite this diversity, the studies sought to understand how or which leadership aspects led to positive or negative results for workers and organizations. In this sense, ethical leadership reduces insecurity, promotes the followers' favorable psychological conditions, transparent and fair action, and offers examples to encourage certain behaviors. In turn, transformational leadership inspires followers, reducing stress and burnout. Therefore, there are different ways or paths by which leadership promotes positive and negative impacts, which seem to vary according to the specific situation an organization experiences. Regarding directive leadership, Krause et al. (2022) and Garretsen et al. (2022) found that this theory dominated at the beginning of the pandemic – between March and June 2020 – and was gradually replaced by a more participatory style. Directive leadership is characterized by behaviors that aim to structure the work, offer guidelines, establish performance requirements for followers, and assist the development of strategic objectives at the beginning of the crisis.

Another study found that leadership increases personal social capital – defined as the sum of resources the person has for belonging to a network of relationships, reducing depression (which negatively affects performance). These leaders focus on the followers' personal development and growth, increasing their self-efficacy and promoting resilience. Leaders can be seen as psychological resources that followers can use in demanding situa-

tions, preventing depression. The authors also highlight the role of the immediate supervisor. On the other hand, personal social capital refers to people who can be counted on in adverse situations, with the leader facilitating this social capital (Ruiz-Palomino et al., 2022).

Similarly to ethical leadership, the study conducted by Tuan (2022) approaches the matter from the leader-member exchange theory (LMX) perspective. This study posits that when leaders establish high-quality relationships with their followers – achieved through clear and transparent communication of crisis-related policies, maintaining close engagement, and providing support for effective job performance amidst the crisis – such efforts result in the reciprocation of greater resilience from the followers. Furthermore, the study suggests that leadership can influence how the organization and its employees perceive the context and consequences. This influence fosters the development of a positive mindset. This valuable resource leads to other assets such as constructive thinking, resilience, adaptability to new circumstances, and flexibility in navigating crises. Once again, this underscores the pivotal role of leaders as purveyors of resources crucial for navigating crises (Tuan, 2022).

Table 3 summarizes the theories that underlie the type 2 studies:

**Table 3**  
*Leadership theories in articles classified as type 2*

Authors	Leader characteristics	Impacts
Gray et al. (2023)	Examines the effectiveness of leaders' support during a crisis on issues related to autonomy, changes, communication, personal resources, security, time, tone, work equipment, and workload.	When practices were useless, there was an increase in stress and negative tension.
Hadjielias et al. (2022)	Entrepreneurs' resilience type 1: ability to bounce back after business disruption; and type 2: optimists that businesses remain partially open.	Greater collectivism and greater flexibility. Type 1: alert to new opportunities and problems, and type 2: greater trust in networking and family.
Howe-Walsh et al. (2022)	The practice of the pre-pandemic leadership of hiring expatriate labor (self-initiated) was inefficient during the pandemic as they returned to their countries, and the hotels were left without qualified local labor.	The leader understood that it would need to train local labor for crises.

(continues)

**Table 3 (conclusion)***Leadership theories in articles classified as type 2*

Authors	Leader characteristics	Impacts
Matthews et al. (2022)	Rational decision-making and safety communication as clear, initial, evidence-based actions.	Increased work-life balance and a decrease in turnover intentions over the semester.
Wang et al. (2022)	Leadership through virtual communication (rich communication as opposed to lean communication) to drive teamwork.	Helps to mitigate the negative impacts of rigorous government responses to the pandemic and helps leaders deal with daily anxiety by facilitating information, daily ideation, and the improvement of the team's creative solution.
Yeo (2021)	Based on the metaphor of human anatomy, investigation of how leaders reacted to the pandemic.	Leaders turned to their inner core and values to act compassionately instead of just rational decision-making. Leaders gained the courage to admit their vulnerability and see the value in others. They could help with employee problems more effectively.

Hadjielias et al. (2022) and Yeo (2021) researched rational or emotional decision-making and leaders' resilience. Hadjielias et al. (2022) found two types of resilience among entrepreneurs: in the first type, the business was paralyzed, and the entrepreneur sought ways to become more resilient and stay emotionally well; in the second, the business continued partially functioning, and the entrepreneur remained optimistic, looking for opportunities, without disruption to their personal balance. In Yeo's (2021) study, leaders reviewed their most profound principles and values. They made decisions based on compassion and the needs of employees more than just rational and beneficial to the business. Thus, they could effectively see and help workers navigate the unexpected events that unfolded, which brought external pressures to keep the organization competitive. Decisions before the pandemic, such as the lack of investment in local labor, led to complex situations, as shown by Howe-Walsh et al. (2022), who warns of the need for continuous investment in people to face unexpected crises.

Regarding communication, Wang et al. (2022) found that technologically rich online communication (use of videoconferencing that allows verbal and non-verbal symbols) instead of lean communication (text messages that allow only verbal symbols) can positively impact the team in a context of crisis such as the pandemic.

On the negative side of leadership, Gray et al. (2023) found unhelpful leadership actions, such as trying to implement impractical ideas, responding inconsistently, communicating excessively or insufficiently, spreading inaccurate, wrong, or harmful information, facilitating unsafe practices, taking time to make decisions, blaming others for problems or failures, precariously implement the technology, reduce working hours and number of employees.

## **The pandemic and the model proposed by Hannah et al. (2009)**

In order to employ the model proposed by Hanna et al. (2009) for analyzing the outcomes from studies conducted amid the Covid-19 pandemic, a crucial initial step involves assessing whether the pandemic can be characterized as an extreme event. The collective findings from these studies indicate that the pandemic qualifies as an extreme event, both in terms of the breadth and the potential severity of the physical and psychological consequences – initially unknown. The material consequences for organizations were equally unclear. Still, it was evident that many entities encountered supply chain disruptions or substantial declines in sales due to lockdowns or social distancing measures. Moreover, the widespread shift of employees to remote work required investments in technology and establishing home workspaces (Belitski et al., 2022). This transition exposed the organizations' inability to wield control over and directly influence the pandemic's impacts.

The improvement or worsening of contagion and death rates led to cycles between business openings and closures. The countries studied in the articles responded differently to the advance of the pandemic. While some implemented severe lockdown policies, others opted for more relaxed social distance measures. Nevertheless, a common thread across all studies was the lack of adequate preparedness for such a crisis. The companies' crisis contingency plans proved inefficient in coping with a global and long-lasting phenomenon (Yeo, 2021).

The degree of threat and the magnitude and likelihood of consequences varied greatly depending on the activity sector. In sectors where remote work was unfeasible – like healthcare, food supply, and pharmacies – workers risked their lives due to exposure to contagion and disease transmission (Lee et al., 2022). Other sectors, such as hospitality and tourism, faced near-complete cessation. The paramount concern in these cases was the organizations' endurance, alongside the persistent threat of job loss and insecurity (Nepal, 2020). Notwithstanding, some businesses, such as technology and digital retail, presented accelerated growth since their services/products



met the requisites of social distancing. Their challenge was quickly recruiting and training personnel (Ramli et al., 2023). Therefore, the dimensions in this extreme context varied greatly, but virtually all companies had to make management and leadership adjustments to survive the pandemic.

Some stressors of the context are political instability, government failures to address ongoing terrorist activities, economic inefficiency generated by the lack of a sound fiscal and monetary policy, an inadequate healthcare system, and, for some countries, the lack of qualified local labor and the consequent use of expatriates, which became unfeasible during the pandemic (Howe-Walsh et al., 2022). The closure of borders was also a context stressor, and companies had to survive with existing resources and strive to repatriate as many employees as possible who were trapped abroad (Yeo, 2021).

Emotional and psychological stressors included job insecurity that affected several sectors, such as tourism and hospitality, that caused anxiety, stress, and depression (Gray et al., 2023). This issue was aggravated in industries with high turnover (Matthews et al., 2022). Concerns about financial security (Nguyen et al., 2022), work overload, lack of personal protective equipment (PPE), fear of contracting the disease, and isolation from family, as in the case of nurses (Ramaswamy et al., 2022) were also factors that promote anxiety and burnout. Teachers faced cognitive and emotional stressors due to the need to move educational activities to the online environment and the tension of learning new technology quickly and effectively (Wang, 2022). Implementing safety standards, such as masks and social distancing, was also an aggravating factor for management and workers in general (Liu et al., 2022).

The issue of finances was another type of stressor identified. Managers and entrepreneurs faced the dilemma of prioritizing workers' physical and mental well-being or the company's financial security (Hadjielias et al., 2022; Liu et al., 2022; Ramli et al., 2023). In general, managers realized the need to prioritize people, developing several actions that will be detailed later. Additionally, some companies suffered from technological unpreparedness to work remotely (Yeo, 2021).

As attenuators, the studies made little mention of the physical resources provided by the companies. Gray et al. (2023) indicated some of these resources, such as physical safety at work, material resources to carry out work activities, and financial and mental health resources. Other attenuators were adequate workload, clear and frequent communication about work and context, and autonomy (Gray et al., 2023).

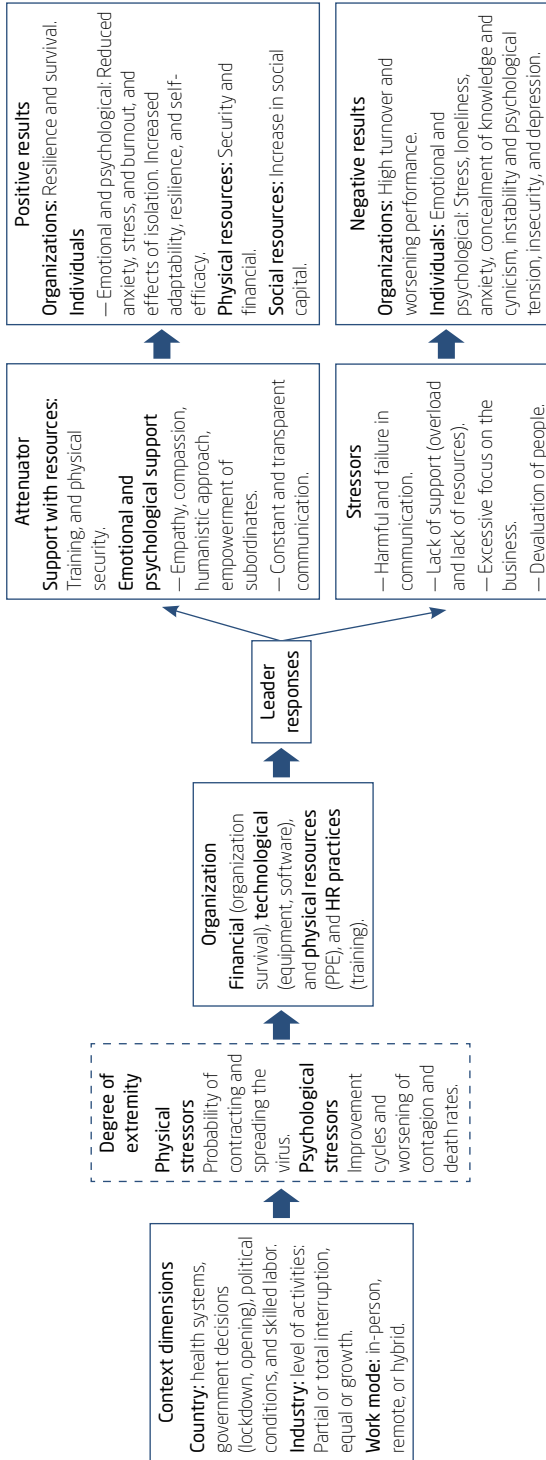
Leadership action emerged as an attenuator across various job contexts, manifesting in distinct manners. For instance, Ngyuen et al. (2022) under-

score how transformational leadership yields positive outcomes by furnishing individuals with essential resources to meet their needs and unveiling their work's purpose. As a result, it acts as a moderator, curtailing the negative aspects that emerge from uncertainties, including role conflicts, job insecurity, and cynicism (Nguyen et al., 2022). Additionally, it plays a role in diminishing stress, alleviating apprehensions about personal financial challenges, countering the adverse effects of isolation, and reducing burnout (Kloutsiniotis et al., 2022). Thus, by inspiring individuals, transformational leadership nurtures psychological well-being and sustains faith in the future. Kloutsiniotis et al. (2022) emphasize the crucial role of line managers, who are responsible for the day-to-day management of workers and implementing HR practices. It is noteworthy that leadership can also serve as a stress-inducing factor when communication is unclear and ineffective or when it prioritizes business concerns above the well-being of individuals (Gray et al., 2023).

## Model of leadership in extreme events

Given that the pandemic introduced unparalleled conditions not previously explored in existing literature, it is essential to tailor the model proposed by Hannah et al. (2009) into a framework designed specifically for organizations in the pandemic context. This adaptation seeks to extract pertinent components that can foster the evolution of leadership's role in extreme contexts and incorporate the most recent advancements in leadership research developed during the pandemic. Drawing from the foundation laid by Hannah et al.'s (2009) model, Figure 1 synthesizes the insights derived from studies on leadership theories, leadership characteristics, and strategies that facilitated both positive and negative outcomes for individuals and organizations.

**Figure 1**  
*Model for leadership in the pandemic*



Therefore, the studies demonstrated that leadership may have played both an attenuator and stressor role in the Covid-19 pandemic, impacting individuals and organizations. In the beginning, the directive leadership favored organizations' reaction to the challenges posed by the crisis, driving the first decisions about the businesses' continuation of closure (Garretsen et al., 2022). The studies suggest that leaders played different roles according to factors such as the conditions of the broader context (the country) and the industry in which they operated. These elements determined how severe – or the degree of extremity – was the event and the level of disruption of business activities and resources. Leaders therefore provided different types of support: 1. emotional and psychological, crucial for people who continued to work in person and on the front lines of virus treatment, such as nurses and essential service workers, where promotion of mental health became the focus of leadership work (Nguyen et al., 2022; Ramaswamy et al., 2022), and also for those where activities have been paralyzed and the future remains uncertain (Kloutsiniotis et al., 2002; Lee et al., 2022); 2. physical, by monitoring people's safety – use of PPE and social distancing – in the case of companies that remained offering in-person services (Hadjielias et al., 2022; Ramli et al., 2022); 3. as a facilitator of social capital formation, which can help adapt to situations of job insecurity and for workers who were made redundant (Ruiz-Palomino et al., 2022); and 4. as promoters of adaptability and self-efficacy, reducing social isolation through constant communication via technology, especially the most sophisticated means, such as videoconferences for people who migrated to the remote work (Liu et al., 2022; Mathews et al., 2022).

As for the levels of leadership, the work by Hadjielias et al. (2022) and Yeo (2021) suggest that the prominent leaders – the CEO and the entrepreneurs – are responsible for ensuring the organization's future by discovering opportunities, creating and maintaining a financial support network, and by reassessment of the principles and values that guide its operations. Other works highlight the essential role of the direct leader (Nguyen et al., 2022; Ruiz-Palomino et al., 2022). Often, the entrepreneurs were also the line managers and their resilience was essential in helping people effectively.

However, leaders played a stressor role when ignoring the employees' workload, when there was excessively negative communication, and when the focus on the business was privileged to the detriment of people. Some studies have highlighted the dilemma between ensuring the company's survival or prioritizing people (Ramli et al., 2023). However, ultimately, prioritizing people enabled organizations' survival (Hadjielias et al., 2022). It is

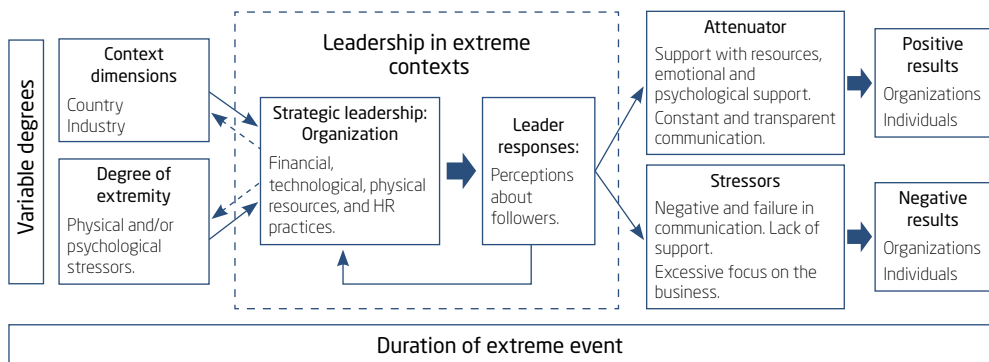
worth mentioning that the articles dealt with companies that survived the pandemic with no reported bankruptcy cases.

There was no specific mention of the sensemaking role of leadership (Dirani et al., 2020; Lee, Lampel et al., 2020), which may have happened because it was a prolonged and global extreme context and event. Faced with so much uncertainty, as in Weick (1993), sensemaking was worked on over the months as the context conditions were changing, not only by the leadership of organizations but also by government leaders and the media (Dirani et al., 2020). As for the specific sensemaking of each organization over time, the clear, transparent, and frequent communication from the leadership about the business and the work seems to have played a role in clarifying and reducing anxiety, giving meaning to what was happening and accomplished.

Based on these considerations, a specific leadership model for organizations in extreme events was developed, presented below:

**Figure 2**

*Leadership model for organizations in extreme contexts*



The new leadership model for organizations in extreme events incorporates the dimensions proposed by Hannah et al. (2009), highlighting the role of leadership and the results obtained, as evidenced in the articles on the pandemic reviewed here. However, the model presents differences when detailing these dimensions, such as the location in time, the likelihood and scale of consequences, and the different types of attenuators and stressors faced by organizations and individuals.

A distinct feature of this model is its specific application to organizations in extreme contexts, where leadership plays a key role, especially the line managers. In such contexts, strategic leadership can act considering the

industry in which the company operates, making course-changing decisions to adapt to the uncertain and volatile environment. In addition, it is the responsibility of the strategic leadership to define the organizational policies related to the resources to be used while facing extreme events, such as physical, technological resources, or HR practices.

Implementing strategic decisions is up to intermediate or direct leadership. These leaders act to attenuate the adverse effects and monitor workers' behavior to verify the measures' effectiveness. Therefore, leaders can adjust their leadership style – directive, transformational, ethical, or other – according to the demands of the context, the policies adopted, and the results observed concerning people and the organization.

Therefore, leadership is an attenuator in the face of the conditions posed by the crisis, providing material, psychological, and emotional resources and adequate communication. Thus, leadership contributes to positive outcomes for individuals and organizations. The longer the extreme event's duration and the conditions' variability, the more critical the role of leadership as an attenuator. On the other hand, when leadership does not establish clear and transparent communication, does not offer adequate support, or excessively prioritizes the business to the detriment of the individuals' necessities, its performance can be considered a stressor. In this scenario, leadership entails negative results for both individuals and organizations.

The new model recognizes the relevance of contextual factors and details the response of leadership, highlighting its potential both as an attenuator of adversities, promoting positive results, and as a possible stressor leading to negative outcomes. The decision-making power is an element that stands out, influencing the scope of the leaders' actions when navigating these events.

Furthermore, the duration of the extreme event influences all aspects of the model, and this element – which characterizes the Covid-19 pandemic – has not been studied in the literature. The longer the event, the more significant the negative impact on the context, countries, and industries, increasing the degree of extremity, the pressure on organizations, and the resources invested. Therefore, the leaders' response becomes even more relevant to mitigate the adverse effects and promote positive outcomes.

## FINAL CONSIDERATIONS

This work aimed to answer the question: “How did organizational leadership face the Covid-19 pandemic, and what results were obtained?”.

This analysis shows that there was more than one leadership model or the most suitable one to adopt during the pandemic. Successful leaders understood the demands posed by the uncertain and extreme context they were going through, discovered how to meet them, and how to motivate their employees according to the sector they worked in and the opportunities that arose. Corroborating Hannah and Parry's (2014) argument that in extreme events, leadership style is complex, leaders and companies need to adapt, innovate, and pay more attention to the well-being and safety of employees, customers, and suppliers. The studies identified in this research revealed the adoption of several leadership styles. Still, almost all converged on mitigating the stressors faced by all workers, especially concerning people's emotional and psychological aspects, which were so impacted by the pandemic and its threats. However, contrary to what was proposed by Burke et al. (2018), leadership in the pandemic has become more participatory and dispersed rather than directive, given the social distancing measures and the massive use of remote work. The line manager assumed a relevant role and could closely monitor individual needs and difficulties and identify how to help each person (Nguyen et al., 2022; Ruiz-Palomino et al., 2022). In addition to providing material and training resources, the direct leader created a positive work environment and promoted resilience, thus increasing self-efficacy and commitment (Ramaswamy et al., 2002; Tuan, 2022).

The article brings three important theoretical contributions to the leadership of organizations in extreme contexts. The first is how leadership can play a mitigating or stressing role in extreme contexts and bring positive or negative outcomes for individuals and organizations. Direct leadership deserves to be highlighted as a source of resources crucial for workers, particularly emotional and psychological resources. For Hadjielias et al. (2022) and Krause et al. (2022), high-level leadership should focus on deciding the direction of the business, fostering organizational resilience, and activating an external network capable of helping in times of crisis. The second explains how leader behaviors and practices can promote positive outcomes – such as reducing anxiety and stress and increasing resilience and self-efficacy – or negative effects. The third theoretical contribution is the suggestion that the most appropriate leadership style will vary, mainly according to the duration of the extreme context and the industry in which the organization operates.

In terms of practical contributions, the model proposed in this study can help leaders prepare efficient contingency plans, understand the fundamental importance of workers on a day-to-day basis, particularly the workers' importance for the companies' survival in contexts of crisis, and the importance of creating programs focused on physical and mental health.

Future studies can work in discussing in-depth the model proposed and working on its validation. Also, it is crucial to discuss further how sense-making was established throughout the pandemic, a factor mentioned in the literature on leadership and not found in the analyzed works. The post-pandemic world has brought new challenges, such as the need to rethink everyone's physical and mental well-being, sustainability, and increased social inequalities. In this sense, future studies can investigate the post-pandemic leaders and workers, the main challenges, and the still-present consequences of the prolonged crisis. Finally, it is important to explore the organizations that shut down or went into bankruptcy during the extreme context in future research. They may offer valuable lessons to guide leaders on how not to act in similar events/contextes.

As for limitations, the articles selected dealt with a few countries and sectors. This element may restrict the analysis of particular circumstances regarding leadership in the pandemic, as Howe-Walsh et al. (2022) pointed out. In their study, for example, the country (Nigeria) had a health system that was very little prepared for the pandemic, which may have aggravated the conditions faced by leaders in that context.

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