

Antecedents of team resilience: A classification and analysis of determining factors

Antécédents de la résilience des équipes : classification et analyse des facteurs déterminants

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Abstract

In today's fast-changing work environment, where uncertainty and constant shifts have become the norm, teams have emerged as a critical element for navigating challenges. These groups are now expected to develop unique qualities that enable them to perform effectively, even in the face of unpredictable circumstances. These conditions explain the focus on the concept of team resilience. However, despite this strong interest, the issue remains complex and there is still much debate on how organizations can promote resilience within teams. Our research addresses this issue by examining a wide range of studies that explore the factors contributing to workplace resilience. Through our study, we found that there is no clear consensus among researchers on the nature of these factors. Our study also allowed us to classify these factors according to their nature, which helped to highlight the roles they play in team resilience. By synthesizing this information, we hope to provide a solid foundation for future research to refine the understanding of team resilience and to Practitioners by identifying key factors that may play a critical role in the resilience of their teams.

Keywords: Team resilience; Workplace; antecedents; classification; roles.

Résumé

Dans le contexte de travail actuel en évolution rapide, où l'incertitude et les changements constants sont devenus la norme, les équipes sont devenues un élément essentiel pour relever les défis. On s'attend maintenant à ce que ces groupes développent des qualités uniques qui leur permettent de fonctionner efficacement, même dans des circonstances imprévisibles. Ces conditions expliquent l'accent mis sur le concept de résilience d'équipe. Cependant, malgré cet intérêt marqué, la question demeure complexe et il y a encore beaucoup de débat sur la façon dont les organisations peuvent promouvoir la résilience au sein des équipes. Notre recherche aborde cette question en examinant un large éventail d'études qui explorent les facteurs contribuant à la résilience du milieu de travail. Notre étude a révélé qu'il n'y avait pas de consensus clair parmi les chercheurs sur la nature de ces facteurs. Notre étude nous a également permis de classer ces facteurs selon leur nature, ce qui a permis de mettre en évidence les rôles qu'ils jouent dans la résilience d'équipe. En synthétisant cette information, nous espérons fournir une base solide pour les recherches futures afin de raffiner la compréhension de la résilience des équipes, et aux praticiens en identifiant des facteurs clés qui peuvent jouer un rôle essentiel dans la résilience de leurs équipes.

Mots clés : Résilience de l'équipe ; milieu de travail ; antécédents ; classification ; rôles.

Introduction

There has been a noteworthy evolution in global organizational structures over the past decade. Team-oriented work frameworks emphasized increasingly (Kozlowski & Bell, 2003) and advocated for navigating intricate work settings (Katzenbach and Smith, 2015). Amidst ongoing global transformations, economic recovery post-recession, and the current trend of escalating work demands, teams frequently encounter challenges leading to unforeseen adverse events, necessitating prompt team responses (van der Vegt et al., 2015). To address workplace challenges and stressors, organizations must establish proficient teams. Consequently, team resilience is recognized as a pivotal resource for sustaining performance and well-being in challenging circumstances. The definition of team resilience, covering its process, capacity, and outcomes, underscores its dynamic nature. Many factors can influence the resilience of teams, a quality that allows them to leverage their strengths to overcome inevitable obstacles. Although interest in team resilience is growing, research remains marked by a diversity of conceptual approaches, and it remains difficult to define a universally accepted theoretical framework (Hartwig et al., 2020). Empirical studies on factors influencing team resilience remain relatively limited. Furthermore, a classification of the background according to roles allows for a better understanding of how each type of factor contributes to team resilience. This approach draws attention to the specific role that each factor plays in helping teams build the capacity to face challenges. By reviewing the literature, the objective of our study is to better understand how resilience develops in teams in the workplace. So, we focus on the elements that are key to giving them the skills and strength they need to overcome barriers. Our central question is: What are the key conceptual foundations, antecedents, and role dynamics that contribute to the development of team resilience in the workplace, and how do they enable teams to overcome challenges effectively? The research attempts to answer three fundamental questions: (a) How do you explain concepts and characterize team resilience? (b) What are the main backgrounds of team resilience, categorized by nature? (c) How do these roles contribute to team resilience?

To answer these research questions, we adopted a literature review approach. Regarding the structure of the article, first we started with a literature review in which we focused on the concepts of resilience and team resilience, and present the theoretical framework in relation to them. We then highlighted the work in connection with our work. The following section was devoted to the presentation of the team's resilience history and classification. In the following

section, we have presented a discussion of the results and finally our article ends with a conclusion.

1. Literature review

1.1. Resilience

The concept of resilience originates in ecological research with Holling (1973), who defined it as the ability of a system to withstand disturbances while maintaining its operation. Since then, this concept has been widely extended to other areas. It is found in ecology (Holling, 1973), psychology (Coutu, 2002), the study of climate change (Hallegatte & Engle, 2019) and organizational sciences (Sapiciay et al., 2017). This transversality shows how resilience has become a key concept for understanding and managing challenges in various contexts. Within the scholarly community, there is no unified definition of the term "resilience." Psychologists define it as "the ability to 'bounce back' from adversity" (Fredrickson, 2001), when scholars in organizational behavior characterize the concept of resilience as the "positive psychological capacity to rebound, to 'bounce back' from adversity, uncertainty, conflict, failure, or even positive change, progress, and increased responsibility" (Luthans, 2002, p. 702). As per management studies, resilience is portrayed as "the skill and capacity to be robust under conditions of enormous stress and change" (Coutu, 2002, p. 52). When examined at the organizational level, resilience is described as "the ability to dynamically reinvent business models and strategies as circumstances change, to continuously anticipate and adjust to changes that threaten their core earning power - and to change before the need becomes desperately obvious" (Hamel & Valikangas, 2003, p. 1). Two essential elements are found in all definitions of resilience: the presence of a significant adversity and the ability to adapt to it in a favourable manner (Masten, 2001). Yet there is no clear consensus on this concept, which has opened the way to diverse interpretations. For some, resilience refers to an intrinsic ability of a system to withstand and function in the face of disruption (Sterbenz et al., 2010). For others, it embodies a process or outcome that emerges after a difficulty (Béné et al., 2012). Some authors combine these two visions. They consider resilience both as an ability (power) and as an action (process) (Kanno et al., 2019). Other authors focus on concrete measures, such as the speed or degree of recovery from a disturbance (Pimm, 1984).

In organizational sciences, resilience is seen as a fundamental ability: that of a system to overcome challenges or function effectively in the face of change (Holling, 1973; Weick and Sutcliffe, 2011; Naderpajouh et al., 2020). This capability is based on practices, structures and

processes that enable organizations not only to adapt but also to enhance their skills, improve productivity and even develop new skills (Vogus & Sutcliffe, 2007).

Since studies focusing on the resilience of organizations commenced in the 1980s with Staw et al. (1981) and Meyer (1982), attempts have been undertaken to incorporate the concept of resilience into organizational studies to enhance comprehension of how resilience functions in unpredictable and demanding settings. Every situation presents its context of adversity (Edson, 2010), necessitating adaptive mechanisms to confront unfavorable situations and stressors, defined as triggers requiring action from an individual, team, or organization (Fletcher et al., 2006).

1.2. Team resilience

The use of teams is widespread in various sectors. Salas et al. (1992) define a team as being “a distinguishable set of two or more persons who interact in a dynamic, interdependent and adaptive manner towards a common and valued purpose/object/mission, have been assigned specific roles or functions to perform, and have a limited lifetime of membership” (p. 126-127). Cunha et al. (2022) offer a similar definition, emphasizing the characteristics of a team as (a) Comprising two or more individuals, (b) participating in social interactions, whether in-person or in virtual environments; (c) sharing a common set of objectives; (d) collaborating to perform tasks pertinent to the organization; (e) demonstrating interdependencies in workflow, objectives, and results; (f) featuring diverse roles and responsibilities; and (g) being integrated within a comprehensive organizational structure with clearly delineated limits and connections the larger contextual surroundings and task setting. Alliger et al. (2015, p. 177) noted that “teams across all business areas are facing challenges. Although they are rarely catastrophic, they are often severe enough to impair performance and cohesion. Many teams can overcome a challenge or two, but only resilient teams can maintain their performance and morale over time.”

Research on team resilience is different from research on resilience at other levels, such as individual or organizational. The particular characteristic of team resilience is the increased interdependence among members and their ongoing commitment to collective tasks. Resilient teams often navigate between different perspectives, actively participating in activities such as coordination, collaboration or compromise (Stoverink et al., 2020, p. 399). Although studies on team resilience are increasing, there is still a significant diversity in conceptualizations among researchers, resulting in a field of study that is still fragmented.

Recent investigations have explored the function of team resilience, viewing it either as an input (West et al., 2009; Lengnick-Hall, 2011), a process (Hartwig et al., 2020; Morgan et al., 2013), or an outcome / operational characteristic within a team—defined as bouncing back from setbacks based on a shared belief (Kennedy et al., 2016).

In accordance with a bibliometric investigation carried out by Hartwig et al. (2020), the majority of papers (22 out of 35 papers) have conceptualized team resilience as an input, specifically as a predetermined capacity or ability of the team. According to West et al. (2009), team resilience is characterized as the team's "capacity to bounce back from failure, setbacks, conflicts, or any other threat to well-being that they may experience" (p. 253). Alternatively, team resilience may be seen as an emergent condition that mirrors an aptitude of the team to rebound from challenges (Stoverink et al., 2020), or the team's capability to tackle challenges, surmount obstacles, or enduring pressure from adverse situations without collapsing (Lengnick-Hall, 2011).

Sixteen papers predominantly characterized resilience as a team process involving the management of adversity and adaptation to disturbances. (Hartwig et al., 2020). The definition put forth by Morgan et al. (2013) describes team resilience as "a dynamic, psychosocial process which protects a group of individuals from the potential negative effect of stressors they collectively encounter. It includes processes by which team members use their individual and collective resources to adapt positively when they are going through adversity" (p. 552). The author highlights team resilience as a process in which teams collectively face adversity. This process involves dynamic exchanges between individual members. A significant aspect in the literature characterizes team resilience as encompassing a collection of processes that evolve over time within teams facing adversities (Alliger et al., 2015; Gucciardi et al., 2018). The authors have outlined this process across various phases. Gucciardi et al. (2018) characterised team resilience as a process comprising three stages: resistance, bounce back, and recovery. Alliger et al. (2015) proposed a three-step team resilience process: a) Minimising behaviour: Before encountering adverse events, teams may proactively recognize potential elements of risk and mitigate them by eliminating sources or preparing for effective management. This proactive approach includes, among other things, scripted discussions to develop a strategy for dealing with unforeseen situations. It also includes: b) behavior management: during disruptions, resilient teams quickly assess the situation, adjust plans as necessary and develop new strategies to adapt to changes while adjusting processes; c) Correcting behaviour: after a disruptive event, teams may engage in

debriefing or reflection sessions. These debriefing sessions allow the team to analyse the impacts on their behavior, identify adjustments to be made to processes and put in place plans to respond more effectively to future challenges (Schipper et al., 2014).

Kennedy et al. (2016) defined team resilience as a result that manifests itself in collective conviction among the team members. This concept of "team resilience" also involves demonstrating the return to normal after overcoming challenges. Key elements of this resilience, such as positive adjustment and long-term team sustainability, appear to be essential components of the team resilience framework. Evaluating a team's resilience could involve assessing its capability to uphold performance, well-being, and team operations amid disruptions or, as an alternative, gauging its capacity to return to its prior level of efficiency (or exceed it) after experiencing challenges. Consequently, teams displaying resilience may exhibit improvements in team performance and fortify their ability to withstand forthcoming occurrences (Carmeli et al., 2013).

Interestingly, some authors have presented several conceptualizations of team resilience. Flint-Taylor and Cooper (2017) considered team resilience as a holistic concept and adopted the conceptualizations of process and outcomes of team resilience. Carmeli et al. (2013, p. 149) described team resilience as involving various elements including a factor ("ability to cope, recover and adjust") and a result ("team belief"). Bowers et al. (2017) developed a model in which team resilience serves as a second-order emerging state located in the midst of different emerging team states and outcomes.

The authors defined team resilience as a capacity, process, behaviour, or outcome. All the provided definitions incorporated a requirement for the team to face some degree of "exposure to significant threat or adversity" (Meneghel et al., 2016, p. 506) as a crucial element of team resilience. The adversities encountered by teams are likely to be diverse. External (or environmental) adversity affects teams when unforeseen events caused by factors outside the team, such as weather systems and terrorist threats, necessitate swift action (van der Vegt et al., 2015). On the other hand, internal team adversity arises from the team's operations within its internal environment. Stoverink et al. (2020, p. 395) differentiate internal team adversity as either "chronic" issues persisting over time (e.g., specific roles becoming overloaded with work) or "acute" events emerging unexpectedly (e.g., equipment failures, permanent or temporary unavailability of a key team member, or sudden interpersonal conflict). Stoverink et al. (2020) also highlight that individual team members can be a source of adversity for the team (e.g., social loafing, a lack of reflexivity about work overload, and

antagonism), adversely impacting team dynamics. Consequently, teams must develop and sustain the capacity to manage both external (environmental) adversity (Van der Vegt et al., 2015) and internal team adversity (Stoverink et al., 2020).

1.3. Theoretical Framework

Conservation of Resources Theory (COR) explains the crucial importance of resources in motivating human behaviour (Hobfoll, 1989). The fundamental principle of COR theory is that individuals strive to obtain and retain valuable resources in order to achieve their goals (Hobfoll, 1989, 2001). Resources are defined as “objects, personal characteristics, conditions or energies that are valued as such, or that are valued because they serve as conduits for the acquisition or protection of valued resources” (Hobfoll, 2001, p. 339). In other words, resilient individuals use key resources to regulate their selves, manage their social relationships, and organize themselves within the broader context of organizations and culture itself (Hobfoll, 2011, p. 117). A central hypothesis of the COR theory is that even in the absence of stress, “people are biologically, socially, cognitively and culturally motivated and directed to protect their resources in order to obtain, conserve and protect their resource reservoirs” (Chen et al., 2015, p. 97).

Although the COR theory has primarily looked at resources at the individual level, recent research has extended it to teams (Chen et al., 2015; Stoverink et al., 2018). Under this model, individuals’ resources can be exchanged and transferred to teams. For example, one member’s positive psychological state can influence other team members and gradually spread to the whole team, while knowledge can be transferred to others and circulated within the team. These team-level resource transfer processes increase the stock of resources and help create and maintain resilient teams. The exchange of resources is positively or negatively affected by team conditions, so-called resource passages (Hobfoll et al., 2018). In other words, the transfer of resources can help teams use resource transitions to develop and strengthen their resilience.

According to the COR theory, a resilient team is one that has acquired abundant resources, which can be accessed and deployed in the event of adversity (Hobfoll, 2011). Therefore, a resilient team is characterized by (1) a larger stock of team resources, and (2) a greater likelihood of accessing and deploying those resources when faced with adversity, failure or loss (Stoverink et al., 2020; Vera et al., 2017). From a dynamic point of view, the COR theory suggests that teams with fewer resources will be more vulnerable to spirals of loss, those with more resources will have more opportunities to recover from losses and even generate a gain

in resources (Hobfoll, 2011). Thus, team resilience (as a capability) can evolve positively or negatively over time. It is therefore important to define the background that supports this much-sought-after concept in organizations.

2. Antecedents of team resilience and their classification

2.1. Antecedents of team resilience

Through our research, we were seeking to investigate the research question regarding the identification of factors influencing team resilience in the workplace. Team resilience is believed to be a consequence of various individual and team resources working together to promote resilient behaviours and outcomes within the team (Chen et al., 2015). Empirical investigations into team resilience have explored the ways in which teams and their members undergo resilience and endeavour to foster team resilience in diverse settings. These contexts encompass military training (Chapman et al., 2021), sports teams (Morgan et al., 2013), and the workplace (Carmeli et al., 2013; Amaral et al., 2015).

In the sphere of empirical inquiries into the factors influencing team resilience in the workplace, Talat & Riaz (2020) identified that team sensemaking is supported by a fundamental process of team bricolage in the context of task interdependence within the team. Abraham Carmeli and colleagues (2015) highlight an essential aspect: human relationships, sometimes overlooked, play a key role in building resilience within management teams. This is a finding that resonates particularly in contexts where pressure and rapid decision-making are constant. Gomes et al. (2014) provide a good example of how team coordination, combined with simulation exercises and appropriate response strategies, can prepare a team to deal with emergency situations. This is a reminder of how much training and anticipation can make a difference. On a more emotional scale, Meneghel et al. (2016) emphasize the power of positive collective emotions. These become a real driving force. Wei et al. (2022) highlight a key point: knowledge sharing and strong team cohesion play a key role in building resilience within project teams. These often-underestimated elements show that the way members interact and collaborate can truly enhance their ability to overcome challenges. In the same line, Sharma and Sharma (2016) identify a range of crucial factors for developing this collective resilience. They talk about team identity, shared mental models, collective effectiveness, cohesion, trust and even psychological security. These concepts, although seemingly technical, reflect deep and interconnected human dynamics. Stephens et al. (2013), echoing these observations, put forward an idea that resonates particularly well: confidence, in addition to strengthening resilience, acts in conjunction with the ability to carry emotional,

thus playing a mediating role in moments of tension. This point invites reflection on the importance of emotional interactions in team strength.

Other researchers point out that team resilience is based on a wide range of factors. Vera et al. (2017) discovered that organizational resources (manifested through organizational practices) and team resources (including teamworking, efficacy beliefs, and transformational leadership) sustain the establishment of team resilience capacity. Hendrikx et al. (2022) identified two separate routes to bolster team resilience: directly by fostering familiarity among team members and indirectly, though with a less pronounced effect, by promoting individual resilience in team members through transformational leadership. Hamsal et al. (2022) provided valuable insight into team resilience by looking at it through several complementary perspectives. They examined individual resilience from a personal perspective, resources and interactions from a collective perspective, as well as organizational practices in their entirety. Their analysis highlights how these different dimensions interact to strengthen the strength and adaptability of teams. Cheng et al. (2023) highlighted how intellectual capital significantly influences team resilience, particularly in the context of information systems development projects. This type of capital—comprising human, technological, and political dimensions—serves as a foundational resource, equipping teams to navigate challenges and adapt in complex, high-pressure environments. Many researchers have been interested in creating models based on previous studies, either generalizing them or adapting them to specific contexts. In the area of project management, Varajao et al. (2021) proposed a theoretical model that highlights key elements for strengthening the resilience of project teams: trust and solidarity, focus on results, commitment, management and accountability, embracing conflicts, work conditions, skills, and behaviours are pivotal elements fostering project team resilience. Pavez et al. (2021) expanded on this perspective, shedding light on the pivotal role of team potency and interpersonal trust as foundational pillars in strengthening the resilience of project teams.

2.2. Classification of antecedents and their roles in team resilience

From all the empirical research we presented above, we can conclude that there are many and interdependent factors that can positively influence team resilience. Several authors have proposed models that bring together a set of antecedents favouring team resilience, suggesting that team resilience has organizational, team and individual level antecedents (Bowers et al., 2017; Gucciardi et al., 2018; Raetze et al., 2021; Hartwig et al., 2020). We have therefore chosen to group them according to their nature (cognitive, emotional, structural), which will

allow us to better clarify their role and impact. From this analysis it is clear that among the cognitive factors, we find team sensemaking and team bricolage. This process means social construction of the environment can facilitate optimal investment of resources through team building for team resilience (Talat & Riaz, 2020). Team sensemaking as a team process is defined by Marks et al. (2001) as interdependent acts that convert inputs to outcomes through cognitive, verbal and behavioural activities. Relational connections were highlighted by Carmeli et al. (2013) who explained that relational connections between individuals can have a powerful impact on their engagement in specific processes and behaviours. Wei et al. (2022) highlighted two cognate factors. First of all, knowledge sharing that promotes the accumulation of knowledge and the ability to innovate and on the other hand team cohesion to promote the coordination of team members. Then Hamsal et al. (2022) highlighted the importance of Team interactions to improve knowledge sharing and bring out unique knowledge and skills to achieve better quality solution, in addition to sharing resources and reducing errors. Finally, team coordination, simulation dynamics, and crisis response activities are activities that reinforce the cognitive preparation of teams in the face of crises or emergencies (Gomes et al., 2014).

The second category of factors are emotional factors that affect emotions and interpersonal relationships. In this category we find the Collective positive emotions highlighted by Meneghel et al. (2016) that can have profound and lasting effects such as building long-term resources. In fact, positive emotions also expand the ways to cope with current stress, and this broadening of mind becomes a psychological resource such as optimism and resilience. Two other factors were supported by Pavez et al. (2021), this is Interpersonal trust and group potency. Confidence refers to the willingness to accept vulnerability and take risks based on positive expectations of another person's intentions or behaviour (Rousseau et al., 1998). As such, it allows team members to develop interpersonal relationships that allow them to feel comfortable and safe in a group (Mathieu et al., 2008) which facilitates the sharing of confidential information, support and conflict management among team members (Edmondson, 2018). The power of the group, on the other hand, refers to "the shared conviction within a group that it can be effective" (Guzzo et al., 1993, p. 87). Strong teams tend to have higher levels of positive and fulfilling motivational energy (Costa et al., 2014) and a greater orientation toward learning (Van den Bossche et al., 2006). The role of individual resilience in building resilience was also supported by Hamsal et al., (2022) and Hendrikx et al. (2022). As the theory of resilience states, it recognizes the importance of

access and resources. According to these principles, having resilient people on the team ensures that they share constructive, adoptive, decisive and creative experiences and know how to manage uncertainty (Hamsal et al., 2022). Finally, Hendrikx et al. (2022) also raised the importance of family support as another type of resource, providing health care professionals with the capacity and support to take on more work stations in a flexible manner or to work longer hours, thereby enhancing the team's ability to overcome the challenges of demand for work. The author also highlighted the familiarity factor within the team to know each other's strengths, weaknesses, preferences and styles, this is a source of synergy that allows team members to achieve more as a team than individually.

The last category is structural factors. It includes first of all organizational resources. The company provides and promotes organizational practices such as work-life balance, skills development, career development, well-being, equity and communication. Access to each of these positive strategies promotes protective resources. They provide team members with shared protective resources as positive and healthy practices to cope with adverse environments (Vera et al., 2017; Hamsal et al., 2022). For team resources, they consist of social support, feedback and learning culture, as well as staff, budget, IT support, delegation and authorization. The organization that provides resources at the team level is essential to building a resilient team. Adequate resources allow the team to act effectively (Hamsal et al., 2022). In this structural context, Varajao et al. (2021) highlighted several factors. We note first of all a) Trust and solidarity. Collaboration among team members is essential to minimize individualistic behaviours for the benefit of teamwork outcomes, which promotes solidarity among project team members (Bandura, 1997) ; then (b) focus on results which is to ensure that team members focus on outcomes rather than their individual needs, such as career or training (Varajao et al. 2021); and (c) work conditions, for example, the opportunities for continuous learning on the part of the team, a positive and fair working environment within the team or flexible working hours. Finally, d) skills, and behaviours which consist mainly of having teams with the necessary skills to carry out activities, as well as adequate behavioural characteristics to perform tasks (Varajao et al., 2021). Cheng et al. (2023) highlighted the Intellectual Capital factor, which includes human, structural and relational dimensions, helping teams acquire additional resources to bounce back. These factors provide a stable framework and the necessary means for the team to achieve its objectives.

Below is a summary table of all the above factors and their roles for team resilience (Table I).

Table I: Summary of factors and their roles for team resilience

Category	Integrated Factors	Sources	Main Roles
Cognitive	Shared mental models	Sharma & Sharma (2016)	Align collective understanding.
	Collective efficacy	Sharma & Sharma (2016)	Boost confidence in the team's abilities.
	Team sensemaking and bricolage	Talat & Riaz (2020)	Improve decision-making, coordination, and knowledge management.
	Relational connections (Engagement)	Carmeli et al. (2013)	Strengthen engagement.
	Knowledge sharing	Wei et al. (2022)	Promote innovation and knowledge accumulation.
	Team interactions	Hamsal et al. (2022)	Prepare teams for crises and emergencies.
	Team coordination, simulation dynamics, and crisis response activities	Gomes et al. (2014)	Share resources, reduce errors, and improve solution quality.
	Team cohesion	Sharma & Sharma (2016), Wei et al. (2022)	Foster team coordination and harmony.
Emotional	Confidence	Stephens et al. (2013)	Strengthens resilience and reduces tensions.
	Emotional carrying capacity	Stephens et al. (2013)	Mediates tension management.
	Collective positive emotions	Meneghel et al. (2016)	Strengthen resilience and manage stress.
	Interpersonal trust and group potency	Pavez et al. (2021)	Facilitate trust, support, and conflict management.
	Trust	Sharma & Sharma (2016), Pavez et al. (2021)	Encourage open expression and collaboration.
	Familiarity synergy	Hendrikx et al. (2022)	Improve collaboration through synergy.
	Family support	Hendrikx et al. (2022)	Increase productivity through family support.
	Individual resilience	Hamsal et al. (2022)	Enhance individual resilience.
Structural	Team identity	Sharma & Sharma (2016)	Strengthen the sense of belonging.
	Transformational leadership	Sharma & Sharma (2016)	Inspire and guide the team.
	Effective teamwork	Sharma & Sharma (2016)	Enhance collaboration.
	Organizational resources	Vera et al. (2017)	Optimize resources and organizational practices.

Organizational practices and team resources	Hamsal et al. (2022)	Foster a high-performance environment.
Trust, solidarity, and focus on results	Varajao et al. (2021)	Reduce individualism and strengthen collective results.
Intellectual capital	Cheng et al. (2023)	Acquire resources to recover.
Work conditions, skills, and behaviors	Varajao et al. (2021)	Improve work conditions and skills.

Source: Authors

3. Discussion

We wanted to carry out this work in order to present factors conducive to team resilience in workplace. Our results demonstrated that, the theme of team resilience has been gaining increasing interest in the past few years. This is attributed to the fact that businesses are increasingly opting for team-based structures to confront various adversities. These teams operate in a VUCA context and they are increasingly required to confront changes and adversities. This explains the growing enthusiasm for this new dimension of team resilience.

Several factors can promote team resilience in workplace. Our review highlights various empirical studies on this topic. Given that the backgrounds of resilience of teams are varied, we have chosen to group them according to their cognitive, emotional or structural nature. This classification will allow for a holistic understanding of resilience, avoiding the neglect of certain essential aspects such as emotions or organizational structures. We have chosen to group these backgrounds according to their natures which will clarify their roles on the team's resilience. Cognitive factors directly influence decisions and adaptation. Emotional factors play on cohesion and well-being, while structural factors ensure a stable environment for the functioning of the team.

Several authors have proposed models that bring together a set of antecedents favoring team resilience. Bowers et al. (2017) took an even broader perspective. Their work conceptualizes team resilience as a second-order emerging state, which results from complex interactions between inputs, processes and dynamics at multiple levels. This model highlights how resilience is built up gradually through these interactions. Inputs include factors like optimism, coping, mental toughness, self-control, patience, hardiness, self-esteem, and task focus at the individual level; trust norms, assertiveness, and redundancy at the team level; and agility, adaptive capacity, situation awareness, diffused power, and relational reserves at the organizational level. Multilevel processes encompass stress management, leadership, and information sharing. First-order emergent involve collective efficacy, team cohesion, shared

mental models, and team adaptability. Another conceptual model of facilitating factors for team resilience, operating at multiple levels with inputs, processes and outcomes, is presented by Gucciardi et al. (2018), where inputs comprise human capital resources, leadership, norms, and mental models; processes involve planning, reflection, and coordination; and outcomes include trajectories of functioning and a shared belief of the team. Raetze et al. (2021) also recommended a conceptual structure suggesting that team resilience has both organizational and team-level antecedents. Organizational determinants include: financial and material resources, structural resources, human and social resources, strategies and practices, while sources at the team level include: team characteristics, Team resources and processes, and leadership behaviour. Hartwig et al. (2020) provide a team resilience hierarchical structure. They view team resilience as an emerging state with such inputs as: transformational leadership, relationships between team members and team culture at the team level. At the individual level, we find: communication skills, expertise, resilience, and team orientation at the individual level. The mediators of this model are team states and resilient team behaviours.

Acknowledging the limitations of our study is crucial. Firstly, it is probable that our search strategy may have inadvertently excluded pertinent published studies on workplace team resilience. Certain pivotal studies might have eluded identification with the employed search string. In light of this constraint, we recognize that the chosen key words were crafted under the presumption that the notion of resilience is explicitly denoted in publications. Consequently, there is a possibility that prior research on the same phenomenon, albeit labeled differently (e.g., resistance, stress), may have been excluded. Additionally, relevant data from grey literature on social media may have been omitted from our analysis. The theoretical nature of our research prevented us from exploring the field, and furthermore, the classification of factors did not take into account the specificity of the studied domain or the interdependency between the different categories.

Despite the limitations of our research, our research has allowed us to understand the cognitive, emotional and structural factors that influence team resilience, in an uncertain context where research is multiplying to better understand this phenomenon. In addition to this, our research has helped us in structuring the various factors into categories that can form a basis for building a solid conceptual model. In terms of managerial implications, companies or managers can use these results to strengthen team resilience. Using this classification will help them identify specific areas of improvement in their teams.

The limits of our research open up prospects for future studies. First, a field study would validate the factors identified and provide an opportunity to explore the emergence of new factors. Future research could also focus on the interaction between these different factors, taking into account their classification. Finally, another aspect to consider is the scope of application. Most of the models proposed by the authors are multidisciplinary, opening the way to varied approaches to team resilience. However, the current context and the specific characteristics of the different domains raises the question of whether team resilience should be approached based on the field of activity. In other words, should a conceptual difference be established between the resilience of a team in project management and that of a team in the medical or sports sectors? Or is team resilience a general concept independent of the field of activity and other characteristics? These questions could be further investigated in a subsequent study aiming to determine the relevance of adopting a more uniform conceptualization of team resilience.

Conclusion

Teams inevitably confront challenges (King et al., 2015), and many find themselves inadequately prepared to respond effectively. Nurturing resilience within teams becomes imperative for organizations to aptly navigate unforeseen events that could pose a risk to both performance and overall survival (Amaral et al., 2015). Therefore, a thorough comprehension of the resilience demonstrated by teams in the workplace is crucial.

The primary objective of our review was to present an overview of factors or resources associated with team resilience. We initiated the review by presenting separate overviews of the concepts of resilience and team. Subsequently, a more in-depth examination of the unique characteristics of team resilience, distinct from resilience at the others levels, was undertaken. The review then delved into the contributing factors of team resilience within the workplace based on previous empirical studies. Then we proposed a classification of these factors according to their natures by highlighting the roles they play in team resilience. In concluding our work, we anticipate that the theoretical framework proposed will inspire additional research encompassing both theoretical exploration and empirical investigation on the resilience of workplace teams. This, in turn, will contribute to a deeper comprehension of ways organizations can assist their teams in effectively handling challenges within the professional setting. Our work has some limitations related to the theoretical nature of our research prevented us from exploring the field, and furthermore, the classification of factors did not take into account the specificity of the studied domain or the interdependency between

the different categories. Those limits open up prospects for future studies that can explore these factors, their roles in team resilience, their fields of application as well as their interactions through an empirical approach providing more concrete insights.

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