

RETHINKING TEAM VIABILITY: LITERATURE REVIEW AND NEW CONCEPTUALISATION

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Annotation. This study focuses on the concept of team viability. Following a literature review on team viability, this study first analyses the historical confusion and inconsistency in how team viability has been defined and measured, as well as compared to similar constructions such as team satisfaction, cohesion, or willingness to stay in the team. The literature synthesis helped categorise the various conditions essential for team viability into six distinct groups: organisational context, team composition, leadership style, team synergy, and teamwork results, which were drawn from both theoretical and recent empirical research. Finally, a new, more precise definition of team viability is formulated to guide future research and the development of a more reliable team viability assessment instrument.

Keywords: management, personnel, personnel management, workers, job design, job performance, team, team formation.

JEL classification: M1, M5, M540.

Introduction

One can come across the expression or concept of a viable team, which allows the reader to assume that a team is like a living organism, existing in a certain environment or a set of factors for a period of time. The *Oxford Dictionary* defines “viable” as “that can be done; that will be successful”, whereas in biology, this term is understood as “capable of developing and surviving independently” (Oxford University Press, 2011). The concept of viability is more often found in the natural sciences; however, in the social sciences, it can

be used to talk about teams in an organisation. According to Kozlowski and Bell (2013), “teams are alive and well and live in organizations”.

In a collaborative work environment affected by rapid technological and other changes, organisations face challenges in maintaining effective teams that are successful over the long term. Team viability is essential for team functioning, and for a very long time has been considered a key condition for effective team processes and success (Hackman, 1987; Sundstrom *et al.*, 1990; Kozlowski and Bell, 2013). In the scientific literature, this term refers to the ability of a team to function effectively and efficiently over a long period of time, regardless of challenges, difficulties, or changes. Since teams are one of the main means by which organisations can achieve their goals, understanding team viability is an essential aspect of organisations.

In the scientific literature, the concept of team viability is quite diverse and conceptually confused with other similar constructs. There are also inconsistencies in the conceptualisations or operationalisations of team viability and its measurement (Bell and Marentette, 2011). Research on team viability is not widespread, probably due to the lack of a properly validated and evaluated instrument that does not reflect similar constructs measured by other instruments. To reduce the existing instrumental gap in science and stimulate research on team viability, this study aims to contribute to a better understanding of team viability. To reach this goal, two research questions are defined:

RQ1: *How is team viability conceptually understood?*

RQ2: *What conditions are important for team viability?*

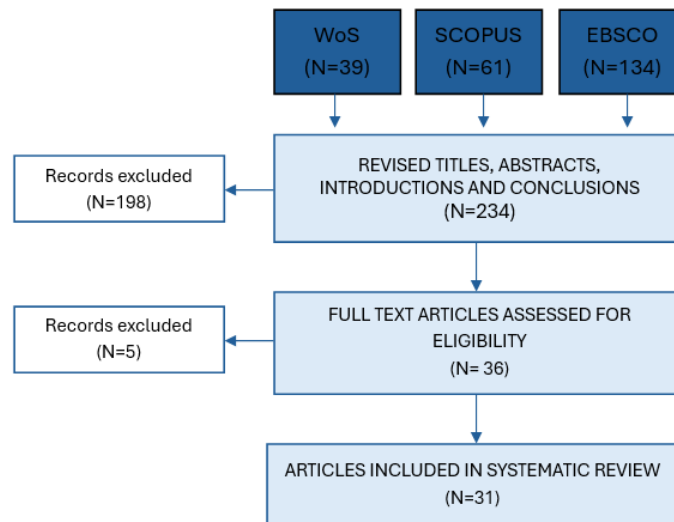
1. Methodology

The methodology applied in this research consists of identifying the relevant available literature on the research questions. Since RQ1 is connected to the concept of team viability and RQ2 with conditions of viability, the scientific literature search consisted of two different stages. It was decided that the first stage should be separated before and after 2013. This was chosen because of the theoretical basis for better understanding the concept, and the practical basis for the second stage to understand the conditions that have been significant in recent years.

The first stage of the qualitative research consisted of searching for relevant articles to answer RQ1. To identify relevant publications, online public libraries were used: the author's personal libraries and databases such as *Web of Science* (WoS), *Elsevier Scopus*, and *EBSCOhost* (EBSCO). The literature search was conducted using the keyword “team viability”, and the selected publication period was selected before 2013 in all databases, with the selected language being English. Peer reviewed full text scientific articles were included and manually screened to ensure that they focused on team viability. To fully understand the concept and formation of team viability in the literature, a snowball search method was employed. This involved using the reference lists of the initial articles to identify formative works that may have been excluded from the keyword searches. Each article included was peer reviewed, and after performing a full text reading, the inclusion aspect was clarity regarding the concept of team viability. Additional five sources were identified through backward citation tracking, some of which were dissertations included in the analysis.

The second stage focused on answering RQ2. A systematic literature review was conducted at this stage. Empirical findings from three electronic databases were analysed: *Web of Science* (WoS), *Elsevier Scopus*, and *EBSCOhost* (EBSCO). The chosen keywords were “team viability” and “group viability”. The selected

publication period was 2013–2023, and the language of the analysed literature was English. The same search terms were used across all databases. The analysis included peer reviewed, full text scientific articles. The scientific literature was analysed in three stages: (1) titles, abstracts, introductions, and conclusions were reviewed; (2) full-text articles were reviewed; and (3) final articles were selected for analysis. The full article selection flow diagram is presented in *Figure 1*.



Source: created by the authors.

Figure 1. Second Stage: Articles Selection Flow Diagram

Specific inclusion and exclusion criteria were applied to ensure the rigor of the systematic literature review. Articles were manually screened and excluded if they did not correspond to the content of the literature review, for example, if they were duplicates or were not empirical articles. Moreover, after reading the full-text articles, some were excluded if human-robot teams, team relationship viability, or organisational viability were their objects of study. In both stages, only proper scientific literature was selected for analysis, ensuring a comprehensive view of the topic. Although the literature search was conducted in two stages, all sources provided information for both research questions. The synthesised information is presented as the result of the analysis.

2. Literature Review

2.1 Background and Conceptualisation of Team Viability

In the scientific literature, there are two main theoretical models that include team viability and are the basis for the conceptualisation of this phenomenon. These theories treat team viability as one of the dimensions that can determine team effectiveness. In addition, the authors introduced the inclusion of team viability as a concept in teamwork research. The first theoretical model was presented by Hackman (1987), who introduced a normative model of group effectiveness. The author distinguished three criteria of effectiveness in the model: (1) the task output acceptable to those who receive or review it (performance); (2) the maintained or strengthened ability of members to work together in the future (team viability); and (3) the extent to which the group is satisfied with the group experience (satisfaction). The term team viability was not used in the research, but with thoughts of the future perspectives for the team, this has become the initiation of the team viability concept. The second theoretical model was introduced

by Sundstrom *et al.* (1990), who presented an ecological approach to the factors of workgroup effectiveness, where effectiveness is assessed applying two criteria: performance and team viability. Authors Sundstrom *et al.* (1990) argued that team viability is “a broad definition that accounts for members’ satisfaction and the group’s future prospects as a work unit by incorporating team viability”. Both models demonstrate that team viability can add value to the understanding of team effectiveness. Both models focus on the future perspective (team work together in the future), but Sundstrom *et al.* (1990) included more aspects that affect the concept under study.

After the theoretical consideration of team viability, the concept has been understood and interpreted in a variety of ways by different authors in subsequent studies, and attempts have been made to expand the concept. Poulton and West (1994) have argued that team viability is related to team member satisfaction, clarity of roles and goals, and team processes. According to Barrick *et al.* (1998), team viability can be viewed as the ability of team members to continue to cooperate. This conceptual definition has also been used by other researchers, such as Mello and Delise (2015). According to Druskat and Wolff (1999), team viability is the ability of a group to continue to work effectively together, and includes positive relationships between members and a focus on tasks. Another widely used definition of the concept of team viability is formulated by Aubé and Rousseau (2005), who define team viability as “team’s capacity to adapt to internal and external changes as well as the probability that team members will continue to work together in the future”.

Other authors, for example, Costa *et al.* (2015), Quinteiro *et al.* (2016), and Smolbik-Jęczmień *et al.* (2019) agreed to the conceptualisation of team viability by Bell and Marentette (2011), who have had criticised the previous positioning of this concept due to the existing confusion and misunderstanding of the construct. Bell and Marentette (2011) expanded the concept of team viability and adapted it to the context of the time, indicating that team viability is “a team’s capacity for the sustainability and growth required for success in future performance episodes”. The authors define team viability in the context of episodes of activity (which previous concepts lacked). Other authors in recent research, for example, Sniffen *et al.* (2019), Slávik *et al.* (2019), and Mysirlaki and Paraskeva (2020), viewed team viability as the ability to work together in the future. This analysis identified the main components of the team viability concept, which are listed in *Table 1*.

Table 1. Components of the concept of team viability identified in scientific literature

Component	Author(s)
Capability to work together in future	Druskat and Wolff (1999), Vigil-King (1999), Afolabi and Osayawe (2005), Bell and Marentette (2011), Slávik <i>et al.</i> (2019), Mysirlaki and Paraskeva (2020)
Satisfaction	Sundstrom <i>et al.</i> (1990), Poulton and West (1994), Tesluk and Mathieu (1999), Vigil-King (1999), Sniffen <i>et al.</i> (2019)
Willingness to continue working together	Sundstrom <i>et al.</i> (1990), Tesluk and Mathieu (1999), Aubé and Rousseau (2005), Balkundi and Harrison (2006), Rentsch and Davenport (2006), Sniffen <i>et al.</i> (2019)
Cohesion	Sundstrom <i>et al.</i> (1990), Tesluk and Mathieu (1999)
Communication	Sundstrom <i>et al.</i> (1990), Poulton and West (1994)
Clear norms	Sundstrom <i>et al.</i> (1990)
Clear roles	Sundstrom <i>et al.</i> (1990), Poulton and West (1994)
Problem-solving	Sundstrom <i>et al.</i> (1990)
Positive member relationships	Druskat and Wolff (1999)
Resilience	Aubé and Rousseau (2005)
Commitment	Rentsch and Davenport (2006), Balkundi <i>et al.</i> (2009)
Sustainability and growth	Bell and Marentette (2011)

Source: compiled by the authors.

Since the first introduction of team viability concepts, various authors have attempted to define and understand the concept of team viability (see *Appendix: Table 1A*). The literature analysis shows that the concept of team viability has many different components, as shown in *Table 1*, ranging from team capability to work together in the future to resilience, commitment, sustainability, and growth. The analysis reveals that various concept understandings are still being used in various research to this day, despite the attempts to bring more clarity by Bell and Marentette (2011). In the scientific literature, team viability is understood as a diverse concept that is somewhat similar to the first theoretical definitions, provided by such scholars as Hackman (1987) and Sundstrom *et al.* (1990). However, it is still misinterpreted as other concepts or is a combination of several other concepts.

2.2 Team Viability and Related Constructs

The construct of team viability is often associated with other constructs because they were used to conceptualise the essence of team viability. The unification or overlap of team viability and similar constructs in research is prevalent; however, the team viability construct differs from similar concepts, as discussed in the following construct analysis.

Team satisfaction is an inseparable part of team viability in the literature. Multiple authors have indicated that team viability is the satisfaction felt by members (Bushe and Coetzer, 2007; Resick *et al.*, 2010; Tu and Liu, 2017). Satisfaction can be described as an emotional reaction to a work situation (Ilies and Judge, 2004), and it arises from individual team members, while team viability is a team-level construct (Bell, Marentette, 2011). According to Bell and Marentette (2011), although team satisfaction may be an important component of team effectiveness, it should not be used as an indicator of team viability. The authors of the present article concur that using only satisfaction as a measure of team viability is incorrect; however, this is one of the conditions for a team to be viable. In addition, Hackman (1987) distinguished satisfaction as one of the dimensions of team effectiveness, near team viability (Hackman, 1987). This demonstrates that satisfaction can be a condition for team viability.

Team resilience is another concept that has been hidden behind the concept of team viability. Team resilience is the ability to maintain stable functioning in the face of a stressful work environment or unfortunate events (Britt *et al.*, 2016). According to Luthans (2002), it is the ability to recover or rebuild after conflict, failure, or even positive events. While team viability describes the team as a whole, resilience can be examined at all levels (Cooperstein, 2017). Similarly to satisfaction, this is more of a condition for the team's viability.

Cohesion results from members working together, whereas team viability is a team-level construct. According to Mello and Delise (2015), cohesion is the affinity of group members for each other and the unifying force of the team. Cohesion arises from individual team members, whereas, to reiterate, team viability is a team-level construct, as stated by Bell and Marentette (2011). This is more of a condition of team viability.

Team longevity is a concept related to team viability. Both concepts have a time perspective (Katz, 1982; Hackman, 1987), but the former is used to describe the time a team has been together, since team longevity refers to the time and overall experience that team members have working together (Katz, 1982). Therefore, team viability is a different concept since the time the team has worked together is not the team's ability in a future prospect.

Team potency, as found by Azizan *et al.* (2017), predicts higher levels of team effectiveness, including team viability. Team potency refers to the shared beliefs of team members regarding the team's overall

capabilities in performing tasks (Gully *et al.*, 2002). While team viability assesses a team's future performance, team potency assesses its current performance (Gully *et al.*, 2002).

Willingness to continue working together or desire to stay on the team and team viability are both very similar concepts (Tesluk and Mathieu, 1999). However, the desire to stay is something that occurs at the individual level (Sundstrom *et al.*, 1990), while staying in a team does not fully describe the viability of the team and is more likely one of the conditions for team viability.

Thus, the constructs most identified with team viability are member satisfaction, team resilience, cohesion, potency, and members' willingness to remain in the team. These constructs are partly interdependent and conceptually distinct from team viability.

2.3 Conditions Indicating a Team' Viability

Organisational context: The first distinguishing category indicating that a team is viable is related to the organisational context. According to Sundstrom *et al.* (1990), organisational culture is crucial because culture in an organisation entails shared values and norms and most clearly reflects the effectiveness and viability of teams. Group norms, according to Hackman (1987), are an important indicator of effectiveness and team viability. According to Sundstrom *et al.* (1990), mission clarity is equally important for a viable team, as team effectiveness may depend on a clearly defined mission or goal within the organisation. An organisational environment that supports and reinforces competent task performance through an information system that provides the data needed to assess the situation and evaluate alternative action strategies is also important for team viability (Hackman, 1987). According to Sundstrom *et al.* (1990), task planning depends on technology and may even be determined by it. Good employment practices that are part of the organisation can include employment relations issues, such as employee contracts that specify clear terms of employment (Poulton and West, 1994) and are part of team viability. According to Hackman (1987), an organisational environment that supports and reinforces competent team performance through a reward system (Hackman, 1987) also has an impact on the team viability. Sundstrom *et al.* (1990) also recognised the importance of rewards and additional benefits for viable teams. An organizational environment that supports and reinforces competent task performance through training and consultation is also important for a viable team (Hackman, 1987; Sundstrom *et al.*, 1990). According to Sundstrom *et al.* (1990), the physical work environment contributes to maintaining team viability because communication and cohesion among members may depend on the workplace or gathering areas that encourage informal communication. How the organisation and task are structured is equally important (Hackman, 1987). Sufficient material resources, which are needed to complete the task well and on time, also indicate that the team is viable (Hackman, 1987; Sundstrom *et al.*, 1990).

Team composition: The second category that has emerged in scientific literature is related to team composition. According to Hackman (1987), the composition of the group provides the necessary number and combination of members with the necessary task skills. Baird and Baard (2021) found that team size had a negative impact on team viability, as working in larger teams resulted in lower team member satisfaction, and member interactions were more difficult and complex. According to Hackman (1987), team members should be moderately diverse to achieve team viability. In addition, members of an overly homogeneous group may get along well, but they lack the resources needed to be successful, while an overly heterogeneous group may have a lot of talent but cannot properly utilise it. Diverse education of team members is also important, as, found by Foo *et al.* (2006), educational diversity was positively related to perceived team viability.

On the other hand, team member similarity is also important for team viability. According to Afolabi and Osayawe (2005), the openness of team members to experience and the need for achievement are also essential. The extraversion of the team members is also one of the aspects that positively affects the concept under study (Afolabi and Osayawe, 2005). Team members should demonstrate emotional stability (Afolabi and Osayawe, 2005) and emotional intelligence (Afolabi and Osayawe, 2005; Pitts *et al.*, 2012) and know how to use humour (Romero and Pescosolido, 2008). According to Romero, Pescosolido (2008), the successful use of organisational humour in groups creates a positive effect and supports the viability of the group. The personal abilities of team members, such as creativity, have been proven to be positively related to team viability (Tu and Liu, 2017). A study by Xue *et al.* (2022) found that individualism demonstrated by members had a negative impact on team viability. Besides, when team members maintain strong individualistic beliefs, they tend to think and act independently without considering the team's collective goals. Williamson *et al.* (2023) attempted to prove that the diversity of social classes in a team negatively predicts team viability, but this relationship was not statistically significant. According to Williamson *et al.* (2023), when team members are similar in social class, viability is higher.

Leadership style: Another category that has emerged in the scientific literature as a condition of team viability is associated with team leader, because the officially appointed team leader also contributes to maintaining team viability. According to Sundstrom *et al.* (1990), it is important for team members to receive performance feedback and gain autonomy and independence from their leaders. Another important aspect of a viable team is the prestige of the team leader, for, according to Balkundi *et al.* (2009), the higher the formal prestige of the leader, the higher the viability of the team. Although prestige provides respect in the informal consultation network, it will still supplement the formal powers of the team leader and provide a lot of information about the tasks and activities of individual team members (Balkundi *et al.*, 2009). In addition, Balkundi *et al.* (2009) stated that teams with high levels of team leader brokerage are associated with reduced team viability. Scientific studies have also demonstrated the positive impact of transformational leadership on team viability (Paolucci *et al.*, 2018; Mysirlaki and Paraskeva, 2020; Tran and Vu, 2021). Although the implementation of leadership styles also depends on the characteristics of followers, a study by Tran and Vu (2021) revealed that transformational leadership is more effective than shared leadership (Tran and Vu, 2021). In addition to the leadership style fostering team viability, the leader's emotional intelligence has been found to have a positive effect on team viability (Mysirlaki and Paraskeva, 2020). Based on Baird and Baard (2021), leaders who strive for team viability must empower their teams structurally. As a social concept, structural empowerment is understood as sharing power with individuals or an organisational unit (e.g., teams) by delegating formal authority or making decisions (Baird and Baard, 2021). Other studies (e.g., Fu *et al.*, 2020) have attempted to demonstrate the impact of the degree of implementation of human resource management by the manager, but the hypotheses were not confirmed in their study.

Team synergy: The development of cooperation between different personalities in a team, which can be called team synergy, is the next category widely discussed as a condition for team viability. Poulton and West (1994) claimed that it is important that team members understand the skills and experiences of other team members, which will help in proper guidance among team members. According to Afolabi and Osayawe (2005), team viability is positively affected by the division of the team's workload and the flexibility of team members. Trust and respect among team members positively affect team viability because they increase individuals' commitment to the group and their willingness to cooperate (Jehn *et al.*, 2008). The positive impact of trust on team viability was also found by Dimas *et al.* (2023), who revealed that team learning and psychological safety are important conditions in viable teams. Team prosocial

motivation also positively affects team viability (Hu and Liden, 2015), as, in socially motivated teams, members share the same values and have a common goal (Hu and Liden, 2015). According to Foo *et al.* (2006), social integration positively affects team viability because socially integrated teams are better able to integrate a wider range of information against the negative effects of information overload. Satisfaction and satisfaction with the task should also be an indicator of team viability because it is related to teamwork, organisational citizenship, absenteeism, and group processes (Mason and Griffin, 2002). Teamwork engagement is a shared state that can affect team viability (Costa *et al.*, 2015). Another important aspect of team viability is discussed by Druskat and Wolff, (1999) who found that structured peer evaluation, which includes discussions, can clarify expectations and have a positive impact on individuals, relationships, and their task focus.

How a team resolves conflicts and which conflicts should not arise are important aspects of team viability and can affect team synergy. Vigil-King (1999) and Lehmann-Willenbrock *et al.* (2011) have theoretically argued and experimentally found the negative impact of relationship conflicts on team viability. Task conflicts can negatively affect team viability (Vigil-King, 1999). However, the opposite results of the study by Lehmann-Willenbrock *et al.* (2011) showed that task conflict was not significantly related to team viability. Dimas *et al.* (2023) revealed that task and relationship conflicts can contribute to low levels of team viability, but neither their presence nor absence is a fundamental condition for team viability. Interpersonal aggression, as discussed by Aubé and Rousseau (2011), is a negative behaviour in a team that can affect team viability. Team viability can also be negatively affected by ethical conflicts, which are explained as value incompatibility conflicts (Brown *et al.*, 2022).

Team member role recognition is also part of team synergy, which is a condition for a viable team. Sundstrom *et al.* (1990) argue that roles are the basis and can be shared equally by members for team development. This view is supported by the results of the study by Poulton and West (1994), who revealed that the recognition and assessment of individual team roles is an important indicator of viability for team members. However, it is important not only to respect and clarify roles, but also to ensure that team members do not overstep the boundaries of their roles (Sundstrom *et al.*, 1990; Marrone *et al.*, 2007). Role overload in teamwork was found to have a negative effect on team viability (Marrone *et al.*, 2007). Another aspect of the research was interprofessional role clarity as an important aspect of team viability, which was also recognised by Sniffen *et al.* (2019), who revealed that role clarity was positively related to team viability.

Viable teams are characterised by similar thinking and cognition, as confirmed by Lewis (2004). The team thinking system is a form of knowledge that is included in team members, team structure, and processes (Lewis, 2004). During long-term teamwork, common team thinking models are formed (Boies and Howell, 2009). Resick *et al.* (2010) found that similarity in task-oriented thinking models is positively related to team viability. According to Resick *et al.* (2010), similarity in thinking models is important for team viability because when team members understand their task needs similarly, they experience less conflict and better interpersonal relationships, which increases viability.

Knowledge is also an important condition for a viable team and team synergy (Hartner-Tiefenthaler *et al.*, 2022; Xue *et al.*, 2022). Although team members usually have different experiences and knowledge, they must share this knowledge to achieve synergy (Xue *et al.*, 2022). According to Xue *et al.* (2022), when teammates can effectively share knowledge with each other, they will develop a team mindset, have a shared memory, and understand who has the best skills and knowledge to complete a task or solve a

problem. It is important to note that the scientific literature has also found that perceived knowledge hiding by team members can negatively affect team viability (Wang *et al.*, 2019).

Leadership within the team is also an aspect that impacts team viability. Prabhu and Modem (2023) found that the shared transformational leadership of a team positively affects team viability. Demonstrating only transformational leadership by members also helps the team remain viable (Nandan Prabhu *et al.*, 2019). Shared leadership in a team also positively affects team viability (Tran and Vu, 2021; Wu and Cormican, 2021). According to Wu and Cormican (2021), shared leadership has a positive impact on team members' perceptions of work (e.g., reducing role overload, role conflict, role ambiguity, and work stress), thus increasing the level of job satisfaction. When leadership is shared, as discussed by Tran and Vu (2021), common traits of team members are formed, such as collaborative leadership, shared decision-making, and good leader-follower relationships. Curral *et al.* (2017) found in their study that empowering leadership is positively related to team viability. The authors considered empowering leadership as a behavior that can be demonstrated by every team member.

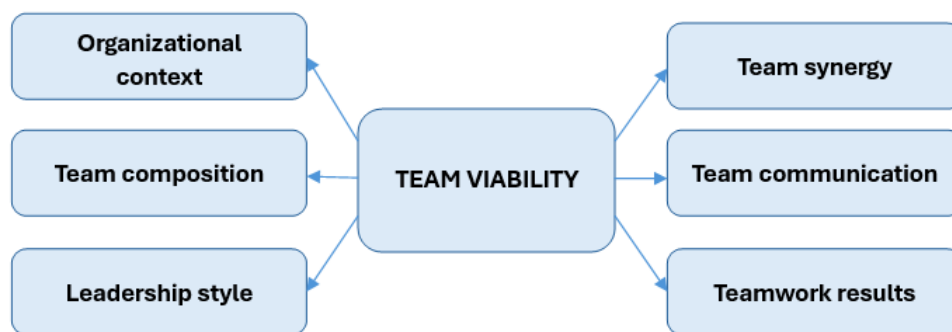
Team communication: Team communication is another category associated with team viability. This category base is information that the team possesses and how they share it with each other. Information creation includes the entire process of exchanging, integrating, and creating information within a team, members must combine their own knowledge with information shared by others (Maynard *et al.*, 2019).

According to Poulton and West (1994) and Afolabi and Osayawe (2005), the team should be open to communication. The aforementioned researchers found that openness to communication was positively related to team viability. Open communication among members is also an important indicator of team viability (Foo *et al.*, 2006). Qu and Xi (2021) found a positive relationship between open information sharing and team viability. According to Hartner-Tiefenthaler *et al.* (2022), open information sharing and communication between team members are important for a viable team. Since modern teams are faced with a wide flow of irrelevant information, communication must be focused, timely, and accurate (Hartner-Tiefenthaler *et al.*, 2022). Additionally, it has been found that it is important for team members to elaborate on information for a viable team (Maynard *et al.*, 2019). Another important aspect of viability associated with communication was examined by Sackett and Fitzsimons (2021), who found that disclosing a personal goal, including a learning goal, to team members positively affects team viability. The authors' study findings show that it is more beneficial for a target team member to disclose learning goals rather than team goals (Sackett and Fitzsimons, 2021).

Teamwork results: Team viability is strengthened by the team's state of mind, felt after achieving work results or simply after working together, which can be categorised as conditions of teamwork results. Poulton and West (1994) showed that low absenteeism and turnover among employees can be used as tools to assess team viability. According to Sundstrom *et al.* (1990), team cohesion is a necessary condition for team viability because teams work best with mutual trust and open communication. As discussed by Barrick *et al.* (1998), there is a correlation between cohesion and team viability, and several studies have found positive relationships between cohesion and team viability (Afolabi and Osayawe, 2005; Jehn *et al.*, 2008; Tekleab *et al.*, 2009; Mello and Delise, 2015; Curral *et al.*, 2017). Mello and Delise (2015) state that cohesion is the affinity of group members for each other, a unifying force within a team. Task cohesion can be positively related to team viability because attraction to the team task determines the continuous efforts to achieve that task (Curral *et al.*, 2017). In addition, the willingness of team members to continue working together is equally important for team viability and is the main condition mentioned by Sundstrom *et al.* (1990) and Barrick *et al.* (1998). The most important condition for viable

teams is the willingness of members to continue working together (Quinteiro *et al.*, 2016). Team potency is another criterion that affects team viability. The results of the study by Azizan *et al.* (2017) revealed that a higher level of team potency predicts a higher level of team effectiveness, including team viability. Another consequence of teamwork, team resilience, is positively associated with team viability (Dimas *et al.*, 2018), since resilient teams tend to be creative and adaptable to change and adversity.

The scientific literature has helped distinguish six categories of conditions that are theorised or have been found to affect team viability (see *Figure 2* and *Appendix: Table 2A*). The conditions are associated with various aspects, including the organisation, team, and members themselves. The review of empirical research analysis reveals new aspects, such as leadership within the team, which is less discussed in theoretical models of team viability.



Source: created by the authors.

Figure 2. Team Viability Conditions

In summary, it can be stated that there are not a few conditions but a set of conditions due to which a team can be viable. Scientific theoretical and empirical research analysis allowed us to distinguish as many as six different categories that are not limited to the team viability components selected by various authors at the beginning of the study, but complement and expand them, and bring us closer to a clearer understanding of what a viable team is. Research on the impact of organisational conditions on team viability is lacking in team viability research, as this category has only been observed at the theoretical level. It has also been noted that empirical research has assessed the impact of leadership within the team, which is rarely found in the context of theoretical team viability conditions. Empirical research has expanded the boundaries of theoretical conditions and added new conditions under which viable teams operate.

2.4 Measurement of Team Viability

Additional insights into team viability can be gained by analysing existing assessment instruments. Assessing team viability can reduce the need for continuous performance measurement and help identify factors that contribute to sustained team performance over time (Bell and Marentette, 2011). By analysing various team viability studies, several assessment instruments were identified. *Table 2* presents the systematised information. During the analysis, the unavailability of certain sources was encountered; therefore, some information (see *Table 2*) is presented based on information from other authors. All the scales in *Table 2* were reliable, as based on the Cronbach's alpha index. It can also be distinguished that

the team viability scales were created for the evaluator manager or the evaluator team member. The wording of the statements also differs greatly, such as “this team” and “I would like.” All the scales were one-factor scales.

Table 2. Analysis of team viability assessment instruments

Authors	Number of items	Likert scale format	Scale reliability (α)	Respondent type	Items wording example
Hackman (1987) ^a	3	5 points	0.97	Team members	“This team would perform...”, „ If I had ... “etc.
Hackman (1988) ^b	7	7 points	0.75	Team members	“As a team... “etc.
Sundstrom <i>et al.</i> (1990) ^c	2	6 points	-	Team members	“I would like... “etc.
Sundstrom <i>et al.</i> (1990, April) ^d	10	5 points	0.95	Team members	-
Barrick <i>et al.</i> (1998)	12	5 points	0.82	Team leaders	“This team ...” etc.
Rentsch and Klimoski (2001)	3	7 points	0.80	Team members	“Members...” etc.
Aubé and Rousseau (2005)	4	5 points	0.84	Team leaders	“Team members...” etc.
Bushe and Coetzer (2007)	6	7 points	0.88-0.93	Team members	“Being a member of this team...”
Marrone <i>et al.</i> (2007)	3	5 points	0.81	Team members	“Team members... “etc.
Balkundi <i>et al.</i> (2009)	2	5 points	0.71	Team members	“I would like to...”, “I have thought...” etc.
Tekleab <i>et al.</i> (2009)	4	7 points	0.89	Team members	“This team... “etc.
Resick <i>et al.</i> (2010)	7	5 points	0.90	Team members	“I get along ...”, “If given the choice...” etc.
Tu and Liu (2017)	9	-	0.92	Team members	-
Cooperstein (2017)	14	-	-	Team members	“This team has... “etc.
Baird and Baard (2021)	12	5 points	0.96	Team members	“My team...”, “Our team is...” etc.

Notes: ^aNo quantitative research was conducted in the article, and no team viability instrument was developed. The information in this table is based on other articles (Lewis, 2004; Gardner and Kwan, 2012), citing this measure. Some of the information may be contradictory. ^b The source Hackman, J. R. (1988). “Flight Crew Questionnaire. Cambridge” could not be found. The table contains information from publications Druskat and Wolff (1999) and Foo, Sin and Yiongn (2006). Some of the information may be contradictory. ^c No quantitative research was conducted in the article, and no team viability instrument was developed. The information in this table is based on other articles (Lehmann-Willenbrock, Grohmann and Kauffeld, 2011), citing this measure. Some of the information may be contradictory. ^d The source Sundstrom, E., Perkins, M., George, J., Futrell, D. and Hoffman, D., (1990, April). “Work-team context, development and effectiveness in a manufacturing organization. Fifth Annual Conference of the Society for Industrial and organizational Psychologists, Miami, FL.” could not be found. The table contains information from publications (Perkins, 1991). Some of the information may be contradictory.

Source: created by the authors.

Given that team viability suffers from construct confusion in the opinions of more than one author, it was decided to examine the above-mentioned scales and stages of their development in more detail. It is important to note that there is no consensus in the scientific literature on when a construct should be considered suitable for use in research, but the essential criteria, according to the author and based on

certain recommendations (MacKenzie *et al.*, 2011; Boateng *et al.*, 2018; Lambert, Newman, 2023) consist of certain common stages of scale development: conceptualisation of the construct, generation and evaluation of items, assessment of construct validity. As can be seen from *Table 2*, the oldest team viability assessment instrument identified in the literature is Hackman's (1987, 1988). It is not surprising that the author, who is considered the first to try to conceptualise team viability, also created an assessment instrument. Although more than one author claimed to have used an instrument created in 1988 that consisted of seven statements, the original source could not be found (Lewis, 2004; Gardner and Kwan, 2012). Thus, the details of the creation of Hackman's (1987, 1988) instrument are not completely clear because the information found in the scientific literature is ambiguous. The information on the team viability assessment instrument by Sundstrom *et al.* (1990) was also ambiguous.

Barrick *et al.* (1998) combined previously developed scales to assess members' willingness to continue working as a team, what they called team viability. Items from the Group Attitudes Scale (Evans and Jarvis, 1986) and Small Group Consensus Scale (Destephen and Hirokawa, 1988) were employed in this study. Although the scale used in the study was reliable, there was no indication of the content validity of the items, that is, whether the items corresponded to the concept of team viability. It is also important to note that this scale only assesses the team's willingness to stay together. Other authors, such as Rentsch, Klimoski (2001), have formulated these statements. Five graduate students who were blind to the study's purpose sorted the items. The results revealed 100 percent agreement for three items for each dimension of team effectiveness, including team viability. However, there is no information on whether the statements were evaluated as corresponding to the concept of team viability.

One of the most widely used instruments in the scientific literature is the Aubé and Rousseau (2005) instrument, which has been used by many authors, such as Dimas *et al.* (2017), Paolucci *et al.* (2018) and others. The statements were formulated based on the analysis, and it is likely that the content of the statements was assessed in one form or another. The team viability scale includes four items designed to assess the team's ability to adapt to change, solve problems, integrate new members, and continue to work together in the future. In the opinion of the authors of this article, and based on the analysis of the concept of team viability, the above-mentioned aspects do not fully reflect the team viability construct.

Bushe and Coetzer (2007) formulated statements, but they were designed to assess only member satisfaction, which does not fully reflect the team viability construct. Marrone *et al.* (2007) generated statements based on team viability theories, but the scale was designed to assess the extent to which the team provided a satisfying and developmental experience and was able to continue working together. Tekleab *et al.* (2009) adapted items from the Small Group Consensus Scale (Destephen and Hirokawa, 1988), which also assessed only members' willingness to continue working as a team. Other authors, such as Balkundi *et al.* (2009), measured team viability as the intention to leave the team, which is a rather different concept to team viability. Resick *et al.* (2010) included other scales in their team viability assessment, such as satisfaction scales (Tesluk and Mathieu, 1999) and willingness to work together with team members (Bayazit and Mannix, 2003). Tu and Liu (2017) combined several scales, such as satisfaction, cohesion, and commitment to the team. All of the aforementioned instruments lacked the effort to generate statements and did not indicate whether the content validity of the statements was checked. Baird and Baard (2021) developed scale statements based on a literature review, but the content of the statements was not assessed for compliance with the team viability construct. The closest instrument to the scientifically recognised scale development methodology is Cooperstein's (2017) attempt to create a team viability scale in her dissertation. The author generated statements, and their content was evaluated by both experts and management students. In addition, statements from existing

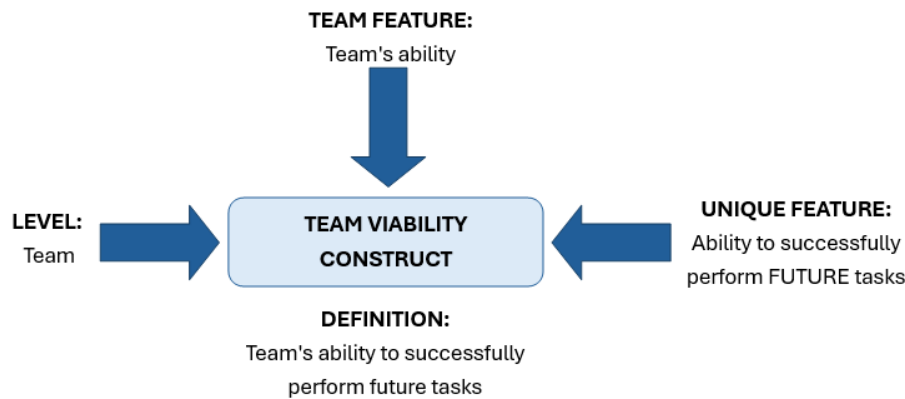
scales were included, even so further stages were not performed. It is important to note that the final ten statements generated by the author were directed at the team's desire to stay together.

In summary, the results of the team viability measurement analysis indicate that there is a lack of a team viability assessment instrument that follows the steps of instrument creation and development, which in turn hinders the reliability and validity of these measures. In addition, the analysed instruments only assess the team's willingness to work together, satisfaction, or cohesion, but external aspects, such as the organisational context or team composition, which are important conditions for team viability, were not included. External conditions that are independent of the team but are necessary for its existence in the modern work environment should help determine the level of team viability.

3. Team Viability in a New Era

Based on the insights provided by the analysis of literature sources, it can be stated that the definition of team viability is multifaceted, as it describes the current state of the team, as well as the ability to achieve team success in the future (Hackman, 1987; Barrick *et al.*, 1998; Bell and Marentette, 2011). Thus, it can be concluded that team viability is a team ability that is associated with the team's future activities and is a successful activity. As a close criterion of effectiveness, team viability is seen as an indicator of future performance (Bell and Marentette, 2011) or as a means of assessing team performance in the present (Guzzo and Dickson, 1996). Looking at the future perspective, according to Kozlowski and Bell (2013, p.460), the question of how to maintain team effectiveness over time is often raised. In the modern context, team viability, should be understood as the "team's ability to ensure sustainability and growth necessary for success in future episodes of activity, because viability assesses the team's potential for future success, based on its current health and sustainability" (Bell and Marentette, 2011). This definition is the only attempt in recent years to reformulate the concept of team viability since the emergence of the original definitions and to help the scientific community reduce the treatment of the concept intertwined with other constructs. However, not much time has passed since this attempt, and researchers have continued to conduct various studies, ignoring the recommendations and increasing the confusion of the construct. Bell and Marentette's (2011) definition of team viability uses the words "health" and "sustainability", which are associated with the modern context, but they can generate additional questions for those less familiar with the concept of team viability, which may be one of the reasons why this concept has not been widely used.

In this study, it is argued that team viability could be redefined to reduce the misunderstanding of the concept. According to the recommendations of authors Lambert and Newman (2023), a well-defined construct has the following properties: (a) it clearly indicates what the construct represents; (b) it indicates the object/level of analysis; (c) it indicates the essential and unique properties or attributes of the construct; and (d) it indicates whether the construct is stable or variable. With this recommendation and in order not to deviate from the original ideas of the team viability concept, which are focused on the ability to work together in the future and continuous success over time, the present study defines *the team viability* construct as *the team's ability to successfully perform future tasks* (Hackman, 1987; Barrick *et al.*, 1998; Bell and Marentette, 2011). The construct definition is shown in *Figure 3*.



Source: created by the authors.

Figure 3. Team viability construct

The formulated description of the team viability construct corresponds to the characteristics of a good construct. In addition, as shown in Table 3, the proposed definition of team viability focuses on the “ability to successfully perform future task” and moves away from the confusion that is currently present in the literature. This conceptualisation shifts from previous theories’ conceptualisations in that it focuses on team-level capabilities, not only on individual emotional or social states.

Table 3. Comparison of team viability conceptualisations

Model	Focus	Key distinction from proposed definition
Hackman (1987)	Capability of members to work together in future is maintained or strengthened	Focus more on social interaction, rather than future task success potential
Sundstrom et al. (1990)	Members’ satisfaction and the group’s future prospects	Includes individual satisfaction, which is a condition of team viability and does not fully define the concept
Proposed definition	Ability to successfully perform future tasks	Shifts from individual emotional and social states to a team-level capability for future success

Source: authors’ own work.

Although some authors who have studied team viability have stated that it can be assessed through team satisfaction, participation, and willingness to continue working together (Druskat and Wolff, 1999; Vigil-King, 1999; Aubé and Rousseau, 2005), the analysis of the scientific literature allows to confidently state that there are many conditions for team viability and are much more than mentioned by theorists. Thus, the authors of the present study believe that the proposed conceptualisation demonstrates the unique aspects of team viability, distinguishes it from similar concepts, and could help team research move forward.

Conclusions

The first research question focused on the conceptual understanding of team viability. A literature review revealed that in the scientific literature, the concept of team viability is quite diverse and is conceptually confused with other similar constructs, from capability to work together in the future to resilience, commitment, satisfaction, sustainability, or growth. There is no single, distinct definition that most authors agree on, and it is still misinterpreted with other concepts, or it is a combination of several other concepts, such as team satisfaction, resilience, willingness to continue working together, cohesion, team longevity, or team potency. There are also inconsistencies in the conceptualisations or operationalisations of team viability and its measurement (Bell and Marentette, 2011). The debate on whether viability is an individual or team-level state can be found in the literature. Many previous instruments relied on individual satisfaction (e.g., Bushe and Coetzer, 2007) or members' willingness to continue working as a team (e.g., Tekleab *et al.*, 2009). This research aligns with Bell and Marentette (2011) in arguing that viability must be viewed as a team-level construct because team viability occurs at the team level, and previously assessed aspects, such as satisfaction or willingness to continue working together are important conditions for team viability, not the definition component, which can be seen in some literature.

The second research question focused on the conditions that are important for team viability. The analysis results categorised viable team conditions into several distinct categories. Conditions derived from the theoretical conceptualisation of team viability and the latest empirical findings. The identified categories included organisational context, team composition, leadership style, team synergy, team communication, and teamwork results. It is argued that these conditions must be present to have a viable team. Evaluating the existing measurements of team viability, it can be concluded that the instruments evaluate only a small portion of the distinguished conditions. In addition, most existing instruments lack reliability and validity. The present findings suggest that while individual states, such as satisfaction, are part of the conditions for viable teams, they do not account for the construction itself. This distinction is critical for future research to avoid adding construct misinterpretation, where different terms are used to measure the same phenomena.

The analysis results guided to a conceptual definition of the construct of team viability in the new era to better understand the concept. It is suggested to define the team viability construct as the *team's ability to successfully perform future tasks*. This definition follows the first theoretical conceptualisation of this construct but also demonstrates a better understanding and focus on team-level states. The formulated description of the team viability construct corresponds to the characteristics of a good construct, where the construct level is the team, team features are the team's ability, and unique construct features are the ability to successfully perform future tasks. This demonstrates that team viability can evaluate the team's ability and generate knowledge about the team's future or team readiness for the future. The definition distinguishes viability from past performance and current team states (satisfaction, cohesion, etc.), framing it for future success and focusing on team-level capabilities.

Research on team viability is not widespread, probably due to the lack of a properly validated and evaluated instrument that does not reflect similar constructs measured by other instruments. According to Bell and Marentette (2011), team viability is important for organisational teams. The authors of the present article argue that team viability is important not only for organisational teams but also for all knowledge worker teams. Accordingly, it is suggested that the next step should be to create and validate an instrument that specifically measures a team's ability to successfully perform future tasks. To create a

reliable measure of team viability in the new era, the steps outlined in the scale creation and development literature (Hinkin, 1998; MacKenzie *et al.*, 2011; DeVellis, 2017; Boateng *et al.*, 2018) should be followed.

To move from theoretical assumptions to empirical measurements, the identified categories must be operationalised. In particular, organisational context, team composition, leadership style, and communication are missing in the existing instruments. Each condition category has identified subcategories, and instrument development that fully incorporates all subcategory aspects is recommended. Nevertheless, a future instrument based on team viability conditions should ask respondents to evaluate their team's collective capacity, and items should be formulated accordingly. Statistical procedures should help finalise the instrument and demonstrate the main categories relevant to today's organisations knowledge worker teams.

For organisations, this study provides a diagnostic framework that can be used to consider the viability of current teams in the presence and quality of existing conditions (see *Figure 2*). For managers and practitioners, this study demonstrates that simply measuring whether employees are satisfied with the team is insufficient to understand the team's future capability to perform tasks, and conditions such as organisational context, team composition, leadership style, team synergy, team communication, and teamwork results should be assessed. For example, does the organisation provide the necessary training and material resources for the team to succeed? Is the team effectively sharing knowledge? Are the team leaders emotionally intelligent? By focusing on all six categories of conditions, organisations can build teams that not only perform well today but also succeed in future tasks.

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PERSVARSTANT KOMANDOS GYVYBINGUMĄ: LITERATŪROS APŽVALGA IR NAUJA KONCEPCIJA

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Santrauka. Šis tyrimas orientuotas į komandos gyvybingumo koncepciją. Atlikus išsamią literatūros apžvalgą apie komandos gyvybingumą, pirmiausia analizuojamas istorinis painumas ir nenuoseklumas. Aiškinamasi, kaip buvo apibrėžiamas ir matuojamas komandos gyvybingumas, palyginti su panašiomis konstrukcijomis, tokiomis kaip komandos pasitenkinimas, sanglauda ar noras likti komandoje. Literatūros sintezė padėjo suskirstyti įvairias sąlygas, būtiną komandos gyvybingumui, į šešias skirtingas grupes: organizacinį kontekstą, komandos sudėtį, lyderystės stilių, komandos sinergiją, komunikaciją ir komandinio darbo rezultatus. Rezultatai pasitelkti tiek iš teorinių, tiek iš naujausių empirinių tyrimų. Galiausiai, suformuluotas naujas, tikslesnis komandos gyvybingumo apibrėžimas, siekiant paskatinti ateities tyrimus ir sukurti patikimesnį komandos gyvybingumo vertinimo įrankį.

Reikšminiai žodžiai: vadyba; personalas; personalo valdymas; darbuotojai; darbo dizainas; darbo atlikimas; komanda; komandos formavimas.

Appendix

Table A1. Definitions of the concept of team viability

Author(s)	Concept	Description
Hackman (1987)	-	Capability of members to work together in future is maintained or strengthened. The social processes used in carrying out the work should maintain or enhance the capability of members to work together on subsequent team tasks.
Sundstrom <i>et al.</i> (1990)	Team viability	Members' satisfaction and the group's future prospects as a work unit. At a minimum, this entails members' satisfaction, participation, and willingness to continue working together. <i>A more demanding definition might add cohesion, intermember coordination, mature communication and problem-solving, and clear norms and roles, all traditionally identified with team maturity.</i>
Poulton and West (1994)	Team viability	Viability relates to the satisfaction of team members, clarity of roles and objectives, and team processes such as communication and decision making.
Barrick <i>et al.</i> (1998)	Team viability	The capability of team members to continue working cooperatively.
Druskat and Wolff (1999)	Group viability	A group's ability to continue working together effectively, which is a concept that involves positive member relationships and task focus.
Tesluk and Mathieu (1999)	Viability	Satisfaction, social cohesion, intention to stay.
Vigil-King (1999)	Group viability	Viability includes both the satisfaction of the group members' needs and the group's ability to exist over time.
Afolabi and Osayawe (2005)	Team viability	Team viability is the capability of the members of a team to continue working together.
Aubé and Rousseau (2005)	Team viability	Team viability may be defined as the team's capacity to adapt to internal and external changes as well as the probability that team members will continue to work together in the future.
Rentsch and Davenport (2006)	Team viability	Team viability reflects team members' willingness to continue working together in the future and the degree to which they are committed to each other.
Balkundi and Harrison (2006)	Team viability	A team's potential to retain its members through their attachment to the team, and their willingness to stay together as a team.
Bell and Marentette (2011)	Team viability	A team's capacity for the sustainability and growth required for success in future performance episodes.
Sniffen <i>et al.</i> (2019)	Team viability	Viability refers to the extent to which the social processes group members use to carry out work enhance the potential for group members to work well together in the future, and individual group member satisfaction refers to the extent to which the collaborative experience satisfies the needs of individual group members.
Slávik <i>et al.</i> (2019)	Team viability	Viability is the extent to which team members are able to continue to work together in the future .
Mysirlaki and Paraskeva (2020)	Team viability	Team viability is defined as team members' assessment of their ability to work together as a unit in the future.

Source: authors' own work.

Table A2. Categories of conditions for team viability

Category	Sub-category	Author(s)	
		Theoretical assumptions	Empirical research (2013–2023)
Organisational context	Team norms	Hackman (1987)	
	Training and consulting		
	Task design		
	Material resources	Sundstrom <i>et al.</i> (1990)	
	Physical work environment		
	Organisation's culture		
	Mission	Hackman (1987), Sundstrom <i>et al.</i> (1990)	
	Information system/technology		
	Rewards and recognition		
Team composition	Good employment practices	Poulton and West (1994)	
	Team size	Hackman (1987)	Baird and Baard (2021)
	Members' diversity	Hackman (1987), Foo <i>et al.</i> (2006)	Williamson <i>et al.</i> (2023)
	Members' similarity	Hackman (1987), Afolabi and Osayawe (2005), Romero and Pescosolido (2008), Pitts <i>et al.</i> (2012)	Tu and Liu (2017), Xue <i>et al.</i> (2022)
Leadership style	Performance feedback	Sundstrom <i>et al.</i> (1990)	
	Autonomy	Hackman (1987), Sundstrom <i>et al.</i> (1990)	
	Transformational leadership		Paolucci <i>et al.</i> (2018)
	Emotional intelligence		Mysirlaki and Paraskeva (2020)
	Prestige	Balkundi <i>et al.</i> (2009)	
	Brokerage		
	Structural empowerment		Baird and Baard (2021)
Team synergy	Objectives	Poulton and West (1994)	
	Referrals		
	Workload	Afolabi and Osayawe (2005)	
	Flexibility		
	Trust	Jehn <i>et al.</i> (2008)	Dimas <i>et al.</i> (2023)
	Respect		
	Social integration	Foo <i>et al.</i> (2006)	
	Interpersonal aggression	Aubé and Rousseau (2011)	
	Psychological safety		Dimas <i>et al.</i> (2023)
	Team learning		
	Prosocial motivation		Hu and Liden, 2015
	Goal commitment	Aubé and Rousseau (2005)	
	Task satisfaction	Mason and Griffin (2002)	
	Work engagement		Costa <i>et al.</i> (2015)
	Positive emotions	Boies and Howell (2009)	
	Peer appraisal	Druskat and Wolff (1999)	
	Relationship conflict	Vigil-King (1999), Lehmann-Willenbrock <i>et al.</i> (2011)	
	Task conflict	Vigil-King (1999)	
	Ethical conflict		Brown <i>et al.</i> (2022)
	Conflict management strategy	Vigil-King (1999)	
	Role Recognition	Sundstrom <i>et al.</i> (1990), Poulton and West (1994)	
	Role clarity		Sniffen <i>et al.</i> (2019)
	Team-level role overload	Marrone <i>et al.</i> (2007)	
	Team boundary spanning		
	Team transactive memory system	Lewis (2004)	
	Team mental models	Boies and Howell (2009), Resick <i>et al.</i> (2010)	
	Knowledge sharing		Hartner-Tiefenthaler <i>et al.</i> (2022), Xue <i>et al.</i> (2022)
	Knowledge hiding		Wang <i>et al.</i> (2019)
	Shared transformational leadership		Wu and Cormican (2021), Prabhu and Modem (2023)

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	Shared leadership		Tran and Vu (2021)
	Enabling leadership		Curral <i>et al.</i> (2017)
Communication	Effective communication	Poulton and West (1994)	
	Openness to communication	Afolabi and Osayawe (2005)	
	Open communication	Foo <i>et al.</i> (2006)	
	Open information sharing		Qu and Xi (2021)
	Focused communication		Hartner-Tiefenthaler <i>et al.</i> (2022)
	Information elaboration		Maynard <i>et al.</i> (2019)
	Learning goals		Sackett and Fitzsimons (2021)
Teamwork results	Absenteeism	Poulton and West (1994)	
	Turnover		
	Resilience		Dimas <i>et al.</i> (2018)
	Potency		Azizan <i>et al.</i> (2017)
	Cohesion	Barrick <i>et al.</i> (1998), Jehn <i>et al.</i> (2008)	Mello and Delise (2015), Curral <i>et al.</i> (2017)
	Willingness to continue working together	Sundstrom <i>et al.</i> (1990), Barrick <i>et al.</i> (1998), Aubé and Rousseau (2005), Tekleab <i>et al.</i> (2009)	Cooperstein (2017), Greer <i>et al.</i> (2018)

Source: authors' own work.