

WOP-P

MASTER IN WORK, ORGANIZATIONAL AND PERSONNEL PSYCHOLOGY

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Personnel Psychology**

Team Psychological Capital and team innovation: the mediating role of team
work engagement

Margarida Alves Rodrigues Paiva de Sousa

Faculdade de Psicologia e de Ciências da Educação - Universidade de Coimbra

Home tutor:

PhD. Paulo Renato Lourenço

Faculdade de Psicologia e de Ciências da Educação - Universidade de Coimbra

Host tutor:

PhD. Jose Navarro

Facultat de Psicologia – Universitat de Barcelona

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Author:

Margarida Alves Rodrigues Paiva de Sousa

Faculdade de Psicologia e de Ciências da Educação

Universidade de Coimbra

margaridarpsousa@gmail.com

Home tutor:

PhD. Paulo Renato Lourenço Faculdade de Psicologia e de Ciências da Educação Universidade de Coimbra

prenato@fpce.uc.pt

Host tutor:

PhD. Jose Navarro

Facultat de Psicologia - Universitat de Barcelona

j.navarro@ub.edu

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Abstract

The positive influence of *team Psycap* on team functioning and team outcomes, namely on *team innovation*, is supported by the literature. The research also suggests that, on one hand, *team Psychological Capital* is associated with *team work engagement*, and that, on the other hand, *team work engagement*, helping team members focusing on what can be improved and on alternative courses of action, can be an antecedent of *team innovation*.

Accordingly, the present study aims to analyse the direct and indirect relationships between *team Psycap* and *team innovation*, considering *team work engagement* as an intervening variable. To this end, an empirical cross-sectional study was carried out, including 124 portuguese work teams, which belonged to different sectors of activity. Using questionnaire survey as the method of data collection, the data were analyzed at a team level and PROCESS was used to generate a simple mediation model.

Results revealed a full mediation of team work engagement in the relationship between team PsyCap and team innovation suggesting that team psycap is related to team innovation via team work engagement. These results reinforces the literature on team functioning and show us that team innovation can be increased through team PsyCap and team work engagement. This study also contributes to the literature focused on the analysis of the mechanisms through which team psycap may improve team innovation.

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1. Introduction

The business world has been going increasingly competitive and challenging due to globalization, requiring teams¹ as an instrument of organizing and managing the work, in order to develop and adapt as fast as they can so that efficiency and effectiveness can be assured (Anderson et al., 1992; West, 2002). This being said, the organizational environment should be one of flexibility and innovation (Ave et al., 2011).

A team can be defined as a sociotechnical system constituted by a set of individuals who recognize themselves as a group (being also recognized as a group by others) and interact regularly, interdependently, with a view to pursuing a common purpose (Kozlowski & Bell, 2013; Lourenço, et al., 2020). Regular team members' interaction, tasks in common, and a clear establishment of team limits (Heled et al., 2015) can turn the group into a meaningful structure (George, 1990). In this regard, the Center for Creative Leadership, for example, conducted a poll in which 83 percent of its respondents thought of teams as the key to organizational success (Center for Creative Leadership, 2006). It is then important to make effective management of the knowledge, skills, and experiences of the team members (Heled et al., 2015).

A lot of effort has been made by organizations in order to find creative sources to tackle global challenges and sustain competitive advantage. All of this through different ways of capitalizing and developing human, social and especially psychological capacities of human resources (Soni & Rastogi, 2019).

Even though researchers started emphasizing positive psychology, this field has a lot of research on the relation between individual traits and the characteristics that make up a team,

¹ In this thesis, following other authors (e.g., Mathieu et al., 2017), the terms group and team will be used interchangeably.

but little on its impact in a team context (West et al., 2009). Thus, in this area, it is important to reinforce the studies conducted at the group level.

Among the constructs addressed in the context of positive psychology, the Psychological Capital, that refers to "positive, individual psychological state of development" (Heled et al., 2015, p. 2) is one of the most studied. However, according to Mathe-Soulek et al. (2014), although the construct also constitutes a phenomenon that occurs at the group level - each of its components are suitable to the group level (Waters et al., 2020) – studies approaching PsyCap as a collective phenomenon are still scarce (Mathe-Soulek et al., 2014).

In this context, Newman et al. (2014), for example, suggested that more research could be developed including Team PsyCap, namely regarding the relationship between team PsyCap and team outcomes such as engagement and creativity. In the same way, Heled et al., (2015) suggests that more work could be carried out in order to study variables as outcomes of team PsyCap such as team performance and innovativeness.

The present research focused on the direct and indirect relationship between team PsyCap and team innovation, considering team work engagement as an intervening variable in that relationship, which contributes to respond to the appeal of the referred authors.

To achieve the proposed objective and adopting the IMO (Input, Mediator, Output) model (based on Ilgen et al., 2005) as framework, a mediation model which includes team PsyCap as the input variable, team work engagement as the mediator, and team innovation as the output variable, was tested.

This study enriches the literature about team PsyCap at a group level, namely regarding the mechanisms through which that variable may improve team innovation, and contributes to the literature on team functioning and team outcomes.

This thesis is structured as follow: the theoretical framework will first be provided, conceptualizing the variables under study, going over their correlations, and presenting the research hypotheses. The empirical study will then be presented, with its procedures and findings explained. The discussion of the findings, the key conclusions, limitations, and recommendations for additional research are set to follow.

2. State of art

2.1. Team PsyCap and Team innovation

PsyCap is a “positive psychological state of development characterized by: (1) having confidence (efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success” (Luthans et al., 2007, p. 3).

It is concerned with ‘who you are’ and ‘who are you becoming’. That’s how it is distinguished from the terms human capital and social capital, where the first is concerned with ‘what you know’, and the second is concerned with ‘who you know’ (Luthans et al., 2006; Luthans & Youssef, 2004).

Each of PsyCap’s components are measurable and able to manage and develop (Luthans et al., 2004), sharing mechanisms between them (Avey et al., 2011). These components depending upon each other and perform in a synergistic way (Luthans & Youssef-Morgan, 2017; Luthans et al., 2007; Rebelo et al., 2018), varying along different contexts (Avey, 2014). In this regard, according to Luthans et al. (2005), the combination of the four components in a

comprehensive construct have a much greater impact on employees' performance compared to the impact of its components alone (Luthans et al., 2005).

PsyCap was primarily conceptualized on an individual level (Dawkins et al., 2015; Luthans & Youssef-Morgan, 2017; Martin et al., 2011; Newman et al., 2014). However, as previously referred, PsyCap can also be experienced at a team level (Clapp-Smith et al., 2009; Peterson & Zhang, 2011; Vanno et al., 2014). The development of a collective PsyCap happens when team members share mental models, organizing their knowledge about tasks, equipment, roles, goals, and capabilities in a similar way (Lim & Klein, 2006). Therefore, team PsyCap which identified as a construct by Walumbwa et al. (2011), can be defined as an emergent state² which can be conceptualized as a group's shared psychological state of development (Peterson & Zhang, 2011) characterized by team efficacy, team hope, team optimism and team resilience (Dimas et al, 2022). According to Dawkins et al. (2015) social contagion processes, which allow the members of a group to share attitudes and beliefs, can explain the emergence of team PsyCap. In this way, team PsyCap can be understood as a product of the dynamic relationships among team members being shared within team members through communications and interactions (Peterson & Zhang, 2011; Dawkins, 2018).

Innovation is a "key team outcome in the current business world" (Dimas et al, 2022, p. 2), due to be a key element for organizations to achieve competitive advantage (Batarseh et al., 2017) as well as organizational competitiveness and economic performance improvement (Dereli, 2015). In a dynamic business environment, an asset that enables an organization to succeed is innovation (Yuan & Woodman, 2010) at all organizational levels, namely at the group level. Therefore, its antecedents should then be explored in order to adopt strategies

² According to Marks et al. (2001), emergent states represent cognitive, motivational or affective states, dynamic constructs that vary as a function of team contexts, inputs, processes, and results. They differ from group processes which refer to interactions between team members.

allowing having more effective teams in organizations and to survive in the long-term (Dimas et al, 2022).

Although innovation can be approached as a process or as a result (Peralta et al., 2014), in this study we will approach innovation as a result, and following Batarseh et al. (2017), we define team innovation as “the intentional introduction and application of ideas, processes, products or procedures new to the team that are designed to significantly enhance the outcome of the team and the organization” (p. 7). Teams that engage in innovation processes tend to foster and implement new and useful ways of work (West, 2002).

Regarding the relationship between team PsyCap and team innovation, the literature suggests that PsyCap is a positive predictor of innovation. Waters et al. (2020), for example, studied the degree to which team PsyCap mediated the relationship between leader PsyCap and team outcomes (e.g., team performance; team organizational behaviour; team innovation) and concluded that, even though the relationship between leader PsyCap and team PsyCap was not significant, both variables were significantly related with team outcomes. Also, Tho and Duc (2019) highlighted the importance to foster team PsyCap in order to enhance team outcomes such as team learning and team innovation. Chen et al. (2023) also concluded that startups' performance, when it comes to innovation, benefits significantly from the entrepreneurial team's psychological capital. Several studies both at an individual and at a team level also show that PsyCap is a positive predictor of innovation (e.g., Dimas et al., 2022; Luthans et al, 2011; Mishra et al., 2019; Tho & Duc, 2021; Strauss et al., 2013).

It should be noted that according to the literature, each of team PsyCaps' dimensions, as can be stated below, positively influences team innovation in different ways, which contributes to explain the positive relationship between team PsyCap as a comprehensive construct and team innovation. Firstly, self-efficacy encourages innovation due to its provision of confidence in a teams' abilities, goal-orientation promotion, more involvement in tasks as well as more

communication and cohesion (West et al., 2009). Secondly, resilience provides the ability to a team to be creative, being adaptative to change (Dimas et al., 2018; Carmeli et al., 2013; Meneghel et al., 2016). Thirdly, optimism can generate ideas for problem solving due to its provision of constructive thinking patterns (Carmeli et al., 2006). Lastly, hope provides motivation to team goals achievement along with the ability to generate alternative pathways (Luthans & Youssef, 2004), which nurtures creativity (Rego et al., 2012). Teams showing higher levels of these four constructs tend to be more innovative (Dimas et al, 2022).

2.2. The Mediating Role of Team Work Engagement in the Relationship Between Team PsyCap and Team Innovation

One of the major challenges in today's organizations is to stimulate team work and teams' capabilities to cope with complex tasks. Evidence shows that engaged employees have a sense of energetic and effective connection with their work activities, seeing themselves as capable of managing the demands of their job (Bakker & Demerouti, 2007) and being more willing to make a greater effort than what is expected from them (Costa et al., 2014a). They are also actively involved in team processes, presenting positive emotions such as enjoyment and pride while working (Marks et al., 2001).

Schaufeli et al. (2002) define work engagement, on an individual level, as a positive, fulfilling, work-related state of mind characterised by vigour, dedication and absorption. More recently, Costantini et al. (2017) defined each component of work engagement as:

Vigour is denoted by high levels of energy and mental resilience while working, the willingness to invest effort in individual work, and persistence even in the face of difficulties. Dedication refers to being strongly involved in individual work and experiencing a sense of significance, enthusiasm, inspiration, pride and challenge.

Absorption is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and it is difficult to detach oneself from work. (p. 2)

Just like PsyCap, on a group level, team work engagement is a team emergent state which also occurs from the interaction and shared experiences of the team members (Torrente et al., 2013). It can be defined as “a positive, fulfilling, work-related, and shared psychological state characterized by team vigour, dedication, and absorption” (Costa et al., 2014a, p.418), being manifested on a more global and unitarian way comparing to the individual level and also presenting a non tridimensional but unifactorial structure (Costa et al., 2014b).

Some teams might develop different levels of engagement than others due to its different patterns of affective, cognitive and motivational outcomes. This happens because there is a difference between individual work engagement and team work engagement. While the individual level is dependent on job resources and demands, the collective level is dependent on the individual actions and cycles of interaction responsible for creating a shared pattern of behaviour (Morgeson & Hofmann, 1999).

Although at an individual level it was found that higher levels in PsyCap tend to positively influence enthusiasm about the work (Avey et al., 2011) and work engagement (and also productivity, employee satisfaction and well-being), leading people to be engaged at work and want to spend time and energy (Costantini et al., 2017; Luthans & Youssef-Morgan, 2017; Nigah et al., 2012), the literature at a group level are still scarce. However, Yoo and Oh (2016), for example, studied the mediating role of team PsyCap in the relationship between shared leadership and team work engagement and concluded that team PsyCap directly influences team work engagement. In the same way, regarding the dimensions of team psycap, the literature also tends to show a positive relationship with team work engagement. Teams with shared beliefs and expectations about their capacities to be effective (collective efficacy) are more likely to actively engage in their work and are proactive regarding the task completion (West et al., 2009).

Plus, teams that hold the collective attitude of “we can do this” are more likely to engage in active planning, temporal processes line-up, and delegation of tasks to capable teammates (West et al., 2009). Teams that are optimistic perceive more value in assisting all the team members, leading to the encouragement of full engagement within team members (West et al., 2009).

Othman and Nasurdin (2011) also found that hope and resilience are important to determine and improve work engagement, Costantini et al. (2017) found that hope is predictor of work engagement and other studies showed that optimism and resilience are also linked to goal persistence and engagement (Bandura & Cervone, 1986; Carver et al., 2010; Fagan et al., 2009; Hakanen & Lindbohm, 2008).

To summarize, the literature (theoretical and empirical) tends to support the assumption that team PsyCap is an antecedent of team work engagement (e.g., Costantini et al., 2017; Othman & Nasurdin, 2011; West et al., 2009; Yoo & Oh, 2016).

Regarding the consequents of work engagement overall, work engagement has been associated with important organizational outcomes such as job satisfaction (Alarcon & Lyons, 2011), organisational commitment (Hallberg & Schaufeli, 2006), intention to quit (Takawira et al., 2014) and innovation (Afsar & Badir, 2015, 2016; Carmeli et al., 2014; Hakanen et al., 2008; Monica & Krishnaveni, 2019; Park et al., 2013; Tjosvold et al., 2004; Vithayaporn & Ashton, 2019). It also increases organizational citizenship behaviors as well as creativity on employees in both individual and group levels (Bakker & Demerouti, 2008). It should be noted that individual work engagement is positively related to team work engagement (Costa et al., 2014a).

Regarding, particularly, to innovation, the literature points to a relationship between work engagement and innovation. Work engagement generates energy for taking initiative and innovative behaviours (Monica & Krishnaveni, 2019) and people engaged in work feel positive

emotions that lead to explorative and creative thinking as well as ideas implementation (Park et al., 2013). Afsar and Badir (2015, 2016) claimed that innovative work behaviour needs high levels of engagement, commitment in a long-term, a sense of meaning in what one is trying to achieve and social support among co-workers. Engagement allows people to feel more safety in a psychological way and more comfortable voicing their opinion (Morrison, 2011), leading them to develop, implement and promote new ideas (Carmeli et al., 2014).

Specifically at a team level, experts from both academic and management fields stated that engagement is the key to innovation (Vithayaporn & Ashton, 2019). It is required to have collective engagement in reflective discussion, decision-making, and feedback during the innovation process (Amabile et al., 1996), being individual team members stimulated to voice their innovative ideas when the promotion of team work engagement takes place (Rahmadani et al., 2020). Plus, team processes that occur within engaged teams have been related to team effectiveness and innovation (Tjosvold et al., 2004). Moreover, Peng and Chen (2022) found that in order to foster team innovation, psychological capital at the team level raises work engagement levels and behaviors in a positive learning environment.

To sum up, based on the reviewed literature we can assume that, on one hand, team PsyCap can be considered an antecedent of team work engagement and, on the other hand, that this last one can be conceptualized as an antecedent of team innovation. Accordingly, team work engagement can be a mediator in the relationship between team PsyCap and team innovation.

3. Objective, Model Under Analysis and Research Hypotheses

Based on what had been stated so far, this research intends to study the mediating role of team work engagement in the relationship between team PsyCap and team innovation. Therefore, based on the IMO model proposed by Ilgen et al. (2005), we will test a mediation

model including team PsyCap as an input variable, team work engagement as a mediator variable and team innovation as an output variable (cf. Figure 1). The direct and indirect effects (via team work engagement) of team PsyCap on team innovation will be analyzed, and, accordingly, we formulate the following hypotheses:

H1: Team PsyCap is positively related with team innovation.

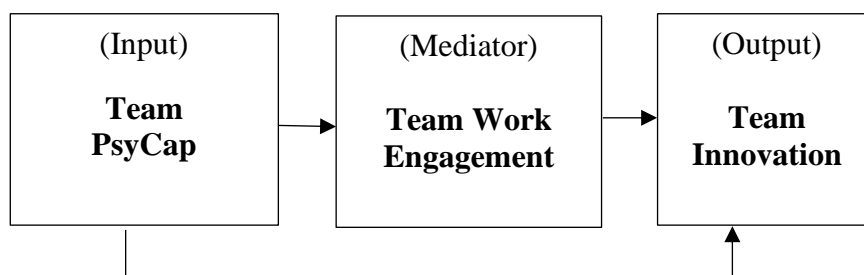
H2: Team PsyCap is positively related with team work engagement.

H3: Team work engagement is positively related with team innovation.

H4: Team work engagement positively mediates the relationship between team PsyCap and team innovation.

Figure 1.

Hypothesized model under analysis (based on Ilgen et al., 2005).



4. Method

4.1. Sample

The sample used in this study was composed by 124 work teams, including 124 team leaders and a total of 554 members, belonging to 83 organisations.

The organisations were from different sectors of activity, namely industry (15.8%), associative (21.7%) and commerce and services (62.5%), with a large part of the organisations being small-scale (30.6%), followed by large-scale (26.4%).

Similarly, the work teams also belonged to different areas of activity, such as production (3.3%), management (3.3%), administration (5.8%), projects (8.3%), commercial (18.3%), services (38.3%), and others unspecified (22.5%). The team size ranges from 3 to 22 members, with an average of approximately 6 members ($SD = 3.96$). In terms of the teams' tenure, it varies from 3 months to 46 years and 3 months, which corresponds to an average of approximately 8 years ($SD = 8.81$).

As for the leaders (cf. Annex 1), they are between 18 and 67 years old ($M = 42.37$; $SD = 11.38$), most of them being men (58.3%). In terms of academic qualifications, most of them mentioned having a bachelor degree (58.7%). The team leaders tenure in their teams varies from approximately 1 month to 27 years, the average being close to 6 years ($SD = 6.66$). The team leaders tenure in the organisation ranged from 3 months to 45 years and 2 months, approximately ($M = 14$; $SD = 10.68$).

As for the members (cf. Annex 2), their age ranged between 17 and 67 years ($M = 35.83$; $SD = 11.61$), being the majority female (59.9%). In terms of academic qualifications, as in the case of the leaders, the majority had a bachelor degree (41.6%). The team members tenure in the team varied between 1 month to approximately 43 years and 5 months ($M = 5.23$; $SD = 6.42$) and the team members tenure in the organisation between approximately 1 month and 50 years ($M = 9.30$; $SD = 10.02$). In addition, the majority of respondents said they had received training on teamwork (56%).

4.2. Procedure

A convenience sample method of data collection was used based on a network of formal or informal researchers' relationships.

In order to a team be valid to inquiry it had to be constituted by a minimum of three individuals who perceived themselves and others as a team, interacting regularly and

interdependently to achieve a common goal (Cohen & Bailey, 1997) and should have a formal team leader. It should be noted that for including a team in the sample, it was necessary to have at least half of the team members' responses and also the responses of the team leader. The data collection took place between the years 2017 and 2020. In order to collect the data, the first contact was established through email or in person with the CEO or the HR manager of the organizations who corresponded to the study requirements (e.g., teams composed of a minimum of three individuals plus a designated/formal leader) containing a letter of presentation of the research project. In the letter of presentation were stated the study goals as well as its variables, a presentation of the research team and the steps and procedures used to collect data. As follows, organizations that accepted to collaborate attended to a more detailed presentation of the research project.

Subsequently, after the organizations consent, data collection took place, using a questionnaire survey (cf. Annex 3; Annex 4), that could be answered rather in person or online. The research team kept available in order to clarify some doubts that could come up. When the research team could not be present, it was asked to the team leaders or to any team member to distribute and collect the questionnaires.

The data collection followed the ethical norms that guide investigation in the Psychology area. Informed consent, anonymity and confidentiality of data was guaranteed, and researchers committed to analyze data at a group level and not at an individual one.

4.3. Measures

Questionnaires included a part with demographic data, such as age, gender, education level, seniority in the team and in the organization. Information regarding team size, and organization and team sector of activity were also gathered, namely through the questionnaires responded by team leaders.

Different questionnaires were administered to team members and leaders. Team leaders provided information about team innovation and team members provided information about team PsyCap and team work engagement.

The scales were applied in their Portuguese version, being specified below.

Team PsyCap (cf. Annex 3): The evaluation of team PsyCap was made through the Psychological Capital Questionnaire (PCQ), developed by Luthans et al. (2007) and adapted to Portuguese language and to the team level, as well as validated, by Rebelo et al. (2018). In this validation, items were reshaped in order to suit the group level (and not to suit the individual level as originally stated).

Answers were given based on a Likert-type scale with six options, where 1 = strongly disagree and 6 = strongly agree.

This instrument holds a total of twenty-four items that hold the 4 components of this construct. Each component corresponds to 6 items, being self-efficacy evaluated in the items between 1 and 6, hope between items 7 and 12, resilience between items 13 and 18 and optimism between items 19 and 24. Examples of items are: In our team [...] “we feel confident analysing a long-term problem to find a solution” (efficacy), “we were able to think of several paths to achieve our current goals” (hope), “we usually managed to solve difficulties at work, in one way or another” (resilience) and “with regard to our work, we always look at the positive side of things” (optimism).

Dimas et al. (2022) used the scale and, based on confirmatory studies, came up with a version that holds 19 items (5 items to the efficacy, hope and resilience components and 4 items to the optimism component). The reliability analysis revealed Cronbach alphas above .70. It was this version which was used in the present study.

It should be noted that as in the present study, in the study conducted by Dimas et al. (2022), following Walumbwa et al. (2011), who considers team PsyCap as a higher-order core construct including the four psychological resources (efficacy, optimism, hope and resilience), global scale score was used. For that, Dimas et al. (2022) conducted a confirmatory factor analysis (CFA), assuming PsyCap as a second-order factor and the four components scores as indicators. All the first-order factor loadings on the second-order factor (team PsyCap) were above .76, supporting the use of efficacy, hope, optimism and resilience factors as indicators of the team PsyCap construct.

Team Work Engagement (cf. Annex 3): In order to evaluate team work engagement, the Team Work Engagement scale, developed by Costa et al. (2014b), was used, being adapted to Portuguese by Tavares (2015). The scale is composed by nine items, being classified through a Likert-type scale with seven options, where 1 = totally disagree and 7 = totally agree. Examples of items are: In our team [...] “we feel strong and vigorous when we are working”.

The scale presented by Tavares (2015), presented a Cronbach alpha of .95 and the dimensionality and reliability studies made by Campelo (2018) and Lopes (2018) reinforced the good psychometric qualities of this scale.

With the use of an exploratory factor analysis, through the principal axis factoring (PAF) method, the dimensionality analysis allowed the emergence of an one-dimensional structure explaining 65.10% of the variance. Regarding the internal consistency, a Cronbach alpha score of .93 was obtained.

Team Innovation (cf. Annex 4): Team innovation was evaluated with a scale developed by Batarseh et al (2017), based on the Vera and Crossan (2005) scale. The Portuguese version is an adaptation developed by Bastos et al. (2019). It is a three items scale, being answered

through a Likert scale with seven options, where 1 = totally disagree and 7 = totally agree. A sample item is: “The team frequently introduces new product/service innovations.”

For its validation, Bastos et al. (2019) conducted an exploratory factor analysis (EFA), using principal axis factoring method, obtaining an one-dimensional solution that explained 62.22% of the total variance. Regarding the Cronbach alpha, the value obtained was .82.

Control variable: Considering that previous studies show that team size influences group processes/emergent states and team outcomes (e.g., Hülsheger et al., 2009; Rebelo et al., 2018), team size will be included as a control variable.

4.4. Data Analysis Procedures

Firstly, teams who did not correspond to the study requirements were eliminated (e.g., less than 50% of team responses; non-fulfilment of the minimum criterion of three members and a formal leader).

Secondly, we evaluated the scales' psychometric qualities. Regarding the scales filled by the team members we ran a CFA, considering team PsyCap and team Work Engagement as two distinctive factors, in order to assess the items' relationships with the latent variables, thus testing the measurement model (Kline, 2016). The analyses were performed using the AMOS (Version 22) software. To evaluate the level of fit of the model, the following indicators were considered: χ^2 Goodness-of-Fit Statistic, Root Mean Square Error of Approximation (RMSEA), and Comparative Fit Index (CFI). Values below .08 for RMSEA indicate a good fit (Browne & Cudeck, 1993). For CFI, values greater than .90 indicate a good fit (Kline, 2016). We also analysed the internal consistency through composite reliability and Cronbach's alpha values and, once reliability of the scales was ensured we assess the convergent and discriminant validity.

Regarding the scale filled by the team leaders (team innovation) since that scale was already shown evidence of validity in previous studies, only reliability was analyzed through Cronbach's alpha estimation.

Since the data, although with a team as referent, was collected at an individual level and this research is conducted at a group level, the data of team PsyCap and Team Work Engagement were aggregated for the team level. In order to justify the aggregation and assure the required reliability of the process, the values of rwg (within-group interrater agreement; James et al., 1984; James et al., 1993) were calculated, as well as the values of Intraclass Correlation Coefficients ICC (1) and ICC (2) (Bliese, 2000).

Concerning rwg, a value of 0.70 or above is suggested as a "good" extent of within-group interrater agreement (James et al., 1993). James (1982) reported an acceptable range for aggregation of .00 to .50 for ICC(1) and Klein and Kozlowski (2000) reported that values of ICC(2) above .50 are acceptable, whereas values above .70 are considered good.

Previous to the hypotheses test, the descriptive statistics of the variables were analysed and correlation analysis among the studied variables was performed. In these analyses, the control variable, team size, was also included.

The model under analysis was tested through correlations between the variables under study (H2), regression analysis (H1 and H3) and through a simple mediation (H4) using PROCESS, which is a tool that allows the use of the bootstrapping method to construct 95% confidence intervals for the indirect effects.

The way to calculate an indirect effect in a simple mediation is through the product of the coefficients from the independent variable to the mediator and from the mediator to the dependent variable. The indirect effect will be statistically significant if zero is not included between the lower and upper bound of the 95% confidence intervals generated by PROCESS.

Team PsyCap was the independent variable, team work engagement the mediator and team innovation the dependent variable.

It should be noted that previously to the regression analyses conducted, the assumptions of the technique were tested, namely the absence of uni and multivariate outliers, absence of multicollinearity, normality, linearity, and homoscedasticity of residuals (Tabachnick & Fidell, 2007). Since there was no violation, all cases and variables were maintained for the analyses conducted.

5. Results

5.1. Psychometric Qualities of Measuring Instruments

As aforementioned (cf. Data analysis procedures section), in order to analyse the psychometric qualities of the scales responded by the team members ($N = 554$) we ran a CFA, considering Team PsyCap and Team Work engagement as two distinctive factors. It should be noted that also as aforementioned (cf. Measures section) following other authors (Walumbwa et al., 2011; Dimas et al., 2022), we used Team PsyCap as a higher-order core construct. Therefore, we used the four dimensions of Team PsyCap - efficacy, optimism, hope and resilience – as indicators of the Team PsyCap construct. The model analysed revealed unacceptable fit indices [$\chi^2(64) = 703.66, p < .001, CFI = .88, RMSEA = .13$]. An analysis of the covariances between the items revealed problems with three items from the Team Work Engagement scale (items 8, 1 and 4). Therefore, these items were sequentially removed. The measurement model with a two-factor structure, without those three items, has a good fit with the data [$\chi^2(34) = 126.57, p < .001; CFI = .97; RMSEA = .07$]. All factor loadings were above .63.

The composite reliability (RC) of Team Psycap was .84 and of Team Work Engagement was .92, which are above the value (.70) recommended by Hair et al. (2019). The Cronbach alpha for Team Psycap was .92 (being .86 for efficacy, .87 for hope, .73 for resilience, and .77 for optimism) and for Team Work Engagement was, also, .92. Thus, all estimated values of Cronbach alpha were good and very good according to the convention of DeVellis (2017).

Once the reliability of the scales was ensured, we analysed the convergent and the discriminant validity. Convergent validity, evaluated by the Average Variance Extracted (AVE), showed values of .58 for Team Psycap and of .65 for Team Work Engagement, revealing to be adequate, since are above the recommended value of .50 (Fornell & Larcker, 1981; Hair et al., 2019). Discriminant validity was assessed by comparing the AVE with the square of the correlation between factors, as recommended by Fornell and Larcker (1981). Since $AVE_{TeamPsycap} = .58$ and $AVE_{TeamWorkEngagement} = .65$ are higher than $r^2_{TeamPsycap.TeamWorkEngagement} = 0.55$, it can be stated that the two factors have discriminant validity.

In the present study, the rwg values obtained for the four Team PsyCap dimensions were .92 (SD = .13, efficacy), .93 (SD = .11, hope), .89 (SD = .15, optimism) and .94 (SD = .10, resilience). Regarding intraclass coefficients, ICC(1) values for efficacy, hope, optimism and resilience were .29, .26, .20 and .18, respectively, and the ICC(2) for the same variables were, respectively, .65, .61, .53 and .50. As for the team work engagement variable, the average value obtained for rwg was .93 (SD = .15) and, regarding intraclass coefficient, ICC(1) value was .38 and ICC(2) value was .74. The values were in line with the values considered acceptable in the literature (Bliese, 2000) and gave support to aggregating team members' scores and proceeding with data analysis at the team level.

Regarding the scale responded by team leaders, as aforementioned we only analysed the internal consistency, through the estimation of the Cronbachs' alpha, since the scale showed evidence of validity in previous studies which used similar samples. The value obtained of .89 revealing a very good internal consistency (reliability), according to the convention of DeVellis (2017).

5.2. Hypotheses Testing

Descriptive statistics and correlations between studied variables are presented in Table 1. To test the hypotheses of this study, we started by analyzing the correlations between team PsyCap and team work engagement and of these with team innovation. We also analyzed the correlations between the variables under study and team size (control variable).

Through the correlational analysis (cf. Table 1.), it is possible to observe that team PsyCap relates positively with team innovation ($r = .35, p < .001$). In the same way, team work engagement relates positively with team innovation ($r = .37, p < .001$). In both cases the correlations are of moderate magnitude, according to Cohen (1988) convention for effect size. Giving the fact that team size, although with a correlation with low magnitude (cf. Cohen, 1988), relates negatively with team innovation ($r = -.24, p = .008$), hypotheses 1 and 3 were tested through multiple regressions, including for each one of them team size as control variable.

Regarding hypothesis 2, we can observe a positive correlation of high magnitude (cf. Cohen, 1988) between team PsyCap and team work engagement ($r = .75, p < .001$). This result provides empirical support to hypothesis 2.

Table 1.*Correlations, Means, and Standard Deviations of the Study Variables.*

Variable	M	SD	1	2	3	4
1. Team size	6.16	3.96	-			
2. Team PsyCap	4.67	0.40	-.07	-		
3. Team work engagement	5.26	0.72	-.05	.75***	-	
4. Team innovation	5.07	1.04	-.24**	.35***	.37***	-

Note. $N = 124$. ** $p < .01$; *** $p < .001$.

In order to test hypothesis 1, as previously mentioned, a multiple regression was conducted with team innovation as the criterion variable and team size and team PsyCap as the predictors.

The results are presented in Table 2. As can be observed, team PsyCap has a positive relationship with team innovation, with team size controlled ($B = .85, p < .001$), which supports the first hypothesis.

Table 2.*Regression Coefficients of Team Size and Team PsyCap on Team Innovation.*

Variable	B	β	SE
Constant	1.43		1.03
Team size	-.06*	-.21	.02
Team PsyCap	.85***	.33	.22
R^2	.17***		

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

To test hypothesis 3, another multiple regression was conducted, with team innovation as the criterion variable and team size and team work engagement as predictors variables.

Results revealed that team work engagement relates positively with team innovation, controlling for team size ($B = .51, p < .001$), supporting hypothesis 3.

Table 3.*Regression Coefficients of Team Size and Team Work Engagement on Team Innovation.*

Variable	B	β	SE
Constant	2.73		0.65
Team size	-.06**	-.22	.02
Team Work Engagement	.51***	.36	.12
R ²	.18***		

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

Hypothesis 4 was tested using the PROCESS macro in SPSS, Model 4.

As seen in Table 4, team PsyCap significantly relates with team work engagement ($a = 1.34$, $SE = 0.11$, $p < .001$), explaining 56% of team work engagement variance ($R^2 = .56$, $F(1,122) = 153.73$, $p < .001$). Equally, team work engagement is significantly related with team innovation, after the control of team PsyCaps' and team size' effects ($b = 0.36$, $SE = 0.18$, $p = .046$), explaining 20% of team innovation variance ($R^2 = .20$, $F(3,120) = 9.50$, $p < .001$). By its turn, team PsyCap didn't show a direct effect on team innovation ($c' = 0.37$, $SE = 0.32$, $p = .244$). Plus, an analysis through bootstrapping method revealed an indirect effect of team PsyCap on team innovation via team work engagement, given the fact that the bootstrap confidence interval didn't include the zero value, demonstrating the significance of this indirect effect ($a*b = 0.48$, $boot SE = 0.27$, 95% CI [0.01, 1.06]). It can then be stated that there is a full mediation of team work engagement in the relationship between team PsyCap and team innovation, supporting hypothesis 4.

Table 4.*Mediation regression analysis for model 4 PROCESS (Hypothesis 4).*

Dependent Variable / Predictor	B	SE	95% CI		R ²
			LLCI	ULCI	
Team work Engagement					.56***
<i>Team Psycap</i>	1.34***	0.11	1.13	1.55	
Team innovation					.20***
<i>Team work engagement</i>	0.36*	0.18	0.01	0.71	
<i>Team psycap</i>	0.37	0.32	-0.26	1.01	
<i>Team size</i>	-0.06*	0.02	-0.10	-0.01	
Indirect Effect	0.48	0.27	0.01	1.06	

Note. N = 124. B = non standardized regression. SE = standard error. CI = confidence intervals. LLCI = lower limit. ULCI = upper limit

* $p < .05$ ***; $p < .001$

6. Discussion

The present research's main goal was to study the relationships between team PsyCap, team work engagement and team innovation, as well as the mediating role of team work engagement in the relationship between team PsyCap and team innovation. Based on the literature, a set of hypotheses were formulated in order to reach that goal and a mediation model was tested.

Our first hypothesis that predicted a positive relationship between team PsyCap and team innovation was supported. This means that teams with higher levels of hope, self efficacy, resilience and optimism will tend to be more innovative. These results are in line with previous studies (e.g., Dimas et al., 2022). Thus, team members should build up positive psychological

resources because in this way their ability to integrate ideas will be higher, which, by its turn, will lead to a broader perspective in the way of visualizing problems, producing better and more solutions and leading them to be subsequently more innovative (Fredrickson, 1998), even in an entrepreneurial environment (Chen et al., 2023). Firstly, when using hope, motivation to team goals achievement and the ability to generate alternative pathways should be provided (Luthans & Youssef, 2004). Secondly, if using self-efficacy, team members are providing confidence in their teams' abilities, goal-orientation, involvement in tasks, communication and cohesion (West et al., 2009). Thirdly, if using resilience, the ability to a team to be creative and adaptative to change is also being provided. Lastly, while using optimism, constructive thinking patterns will be provided, leading to a generation of ideas for problem solving.

Regarding the relationship between team PsyCap and team work engagement, the results pointed to a positive relationship, as predicted in our second hypothesis. In this way, the PsyCap's resources will promote work engagement within teams. This result converges with some previous studies (e.g., West et al., 2009). If we want to achieve team work engagement, it is important for the team to hold shared beliefs about their own capacities of being effective, in this way the team will be more likely to engage in their work and will be proactive facing task completion (West et al., 2009). Plus, optimistic teams tend to perceive an increased value in assisting all the team members, which will lead to an encouragement of all the team members to be fully engaged (West et al., 2009).

Based on the literature, several studies pointed to a positive relationship between team work engagement and team innovation (e.g., Vithayaporn & Ashton, 2019; Tjosvold et al., 2004), being this relationship empirically supported in our research as predicted by hypothesis 3. We can infer that the higher the level of team work engagement, the greater the level of team innovation. According to Amabile et al. (1996), during the innovation process, teams should be engaged in reflective discussion, decision-making and also feedback. Plus, when there is a

promotion of team work engagement, team members tend to be stimulated in voicing their innovative ideas (Rahmadani et al., 2020) and team effectiveness can also be achieved (Tjosvold et al., 2004).

Last but not least, our mediation hypothesis (H4), which proposed that team work engagement acts as a mediator in the relationship between team PsyCap and team innovation, obtained statistical support. It means that groups who use positive psychological resources tend to produce high levels of engagement towards work within teams, which in turn increases the levels of innovation in the group. Since when team work engagement enters in the equation the direct relationship of Team PsyCap on Team Innovation ceases to be significant, this mediation is considered to be a full mediation. This means that team PsyCap contributes to increase team innovation via team work engagement.

7. Conclusions, Limitations and Suggestions for Future Research

Current organizations are interested in stimulating teamwork and their capabilities to cope with complex tasks, which reflects the importance given to teams within organizations. Teams are a crucial unit for the development, adaptation and functioning of organizations.

Organizations should use different ways of capitalizing positive psychological capacities in order to adapt to global challenges (Soni & Rastogi, 2019). This adaptation can happen also with the help of work engagement within teams which can lead to innovation. The capacity to innovate is important for the organizational adaptation within the competitive and challenging business world and also for the assurance of competitive advantage, efficiency and effectiveness. Since nowadays organizations than sets of individuals constitute a network of interrelated groups (Kozlowski and Bell, 2013) analysing their functioning and studying the relationships among processes, emergent states and outcomes is crucial.

The main objective of this study was to analyze the relationship between team PsyCap and team innovation, considering the role of team work engagement as an intervening variable. Based on the literature an IMO model was formulated and tested, revealing that team work engagement may be considered a mediator in the relationship between team PsyCap and team innovation. Thus, this research contributes to the literature focused on exploring the mechanisms through which team PsyCap is related to team innovation.

Our study has theoretical and empirical relevance, being possible to extract some practical implications based on our results.

Firstly, the present study reinforces that team PsyCap is a relevant group emergent state regarding its role on team innovation. The positive relationship found in our research converges with previous studies (e.g., Dimas et al., 2022), which reinforces the literature that has been studying this relationship. On an intervention level, this result allows us to understand the importance of positive psychological resources in the team, which suggest that managers and team leaders should be attentive and adopt strategies to improve those resources, i. e., the team PsyCap. Demerouti et al. (2011) found that short training interventions are effective in developing PsyCap, so training interventions at a team level should be implemented in order to develop their positive psychological resources. Also, Petersen (2015) stated that PsyCap will be more likely to thrive if the environment is one of empowerment and recognition. Therefore, leaders should organize motivational speech sessions in order to keep teams empowered and also, if a team does a good job, leaders should communicate that to them so they can feel recognized for their good work, allowing positive psychological resources to prosper.

In the same line, our results point to a positive relationship between team PsyCap and team work engagement, which converges with other studies (e.g., West et al., 2009). As aforementioned, the training and development of positive psychological resources are important

on an intervention level. It can not only promote teams' to be keener on innovating but also to be engaged in their work.

Moreover, reinforcing the results found in other studies (e. g. Vithayaporn & Ashton, 2019; Tjosvold et al., 2004), our research pointed to that team work engagement is positively related with team innovation. Vithayaporn and Ashton (2019) stated that engagement can be influenced by job recognition because it will make employees feel valuable to the organization. Also, they state that there is a relation between job involvement and job responsibility, so if employees can be involved in the process of decision making, they will feel like they truly belong to the organization. In this way, teams should be recognized by their work and be involved in decision making processes as much as possible so they can feel more engaged in work, increasing innovation behaviour within them. Plus, team leaders should treat every member equally and pay great attention to each person's work-life balance when dealing with team members. Team leaders should concentrate on fostering a culture of trust, respect, and team-oriented objectives (Hsu et al., 2022).

Lastly, the obtained results state that team work engagement mediates the relationship between team PsyCap and team innovation. Considering that we found a full mediation, from a theoretical perspective, since Baron and Kenny (1986) stated that a significant reduction of the direct relationship between the predictor variable and the criterion variable points that a given mediator is potent, this result seems to suggest that team work engagement may be a potent mediator of the relationship between Team PsyCap and Team innovation. According to Peng and Chen (2022), managers should work to boost psychological capital and engagement levels inside their research and development teams in order to improve these teams' performance in terms of innovation and creativity. We can say that the main gap that our research is going to cover is the one of lack of literature regarding the studied relationships on a team level. As some authors (e.g., West et al., 2009; Mathe-Soulek et al., 2014) already referred, there exists a lot of

research about PsyCap on an individual level but little on its group level. Also, the studied mediation was never tested before and add new insights regarding the mediators of the relationship between team PsyCap and team innovation. Another strength of this study is the sample size being greater than 100 real teams.

However, this study also presents several limitations, which can lead to some suggestions to be implemented in future studies.

The first limitation to be pointed out is the cross-sectional design of the study. Because emergent states are dynamic phenomena, the study design only allows bidirectional relationships instead of cause-effect. Therefore, although the rational of our hypotheses was supported in the literature, we can't infer empirical causality. This being said, future research should adopt a longitudinal design.

Secondly, our sample consists only of Portuguese organizations. In this way, results need to be generalized carefully and a sample consisted of organizations from other cultures is recommended for future research.

Thirdly, even though data analysis was carried out at a group level, the fact that data was collected with the same method (Conway, 2002) and in some cases by the same source (both team PsyCap and team work engagement being responded by team members) can result in common method variance. In this line, the method of self-administrated questionnaire may cause social desirability or contamination. Also, regarding the questionnaires' online version, participants might not be familiar with the online platform. However, besides evaluating the answers at a group level, some other measures were taken to mitigate this limitation. Firstly, respondents' anonymity was ensured. Secondly, variables were evaluated by scales which were previously validated. Thirdly, scales were presented separately along with specific instructions

for each (Conway & Lance, 2010; Podsakoff et al., 2012). Lastly, data were collected from different sources (Chang et al., 2010).

Finally, as a last future research recommendation, giving the fact that leadership styles, based on existing literature (e.g. Li, 2018; Rahmadani et al., 2020), seem to be a variable commonly studied along with our study variables, it would be interesting to build a model consisting of all the four variables (team leadership, team PsyCap, team work engagement and team innovation) and consequently study the different relationships among them. It would be also interesting to relate some of the studied variables with other relevant variables in the team work context (e.g., job crafting, extra role behaviour or organizational climate).

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Annexes

Annex 1: Sociodemographic characteristics of the sample of team leaders

Sociodemographic characteristics of the sample of team leaders (N=124)

Sociodemographic characteristics	N	%
Gender		
Female	50	41.7
Male	70	58.3
Age (years)		
< 20	2	1.6
20 – 29	17	13.7
30 – 39	25	20.4
40 – 49	43	35.0
50 – 59	29	23.6
≥ 60	7	5.6
Academic qualifications		
≤ 9 th grade	4	3.3
≤ 12 th grade	34	28.1
Bachelor degree	71	58.7
≥ Master degree	12	9.9
Tenure in leadership (years)		
< 1	22	18.3
[1 – 5]	57	47.5
]5 – 10]	28	15.0
> 10	12	19.2

Annex 2: Sociodemographic characteristics of the sample of team members

Sociodemographic characteristics of the sample of team members (N=554)

Sociodemographic characteristics	N	%
Gender		
Female	326	59.9
Male	218	40.1
Age		
< 20	28	5.2
20 – 29	173	31.4
30 – 39	146	26.6
40 – 49	116	21.1
50 – 59	69	12.5
≥ 60	17	3.1
Academic qualifications		
≤ 9 th grade	38	7.1
≤ 12 th grade	215	40.0
Bachelor degree	224	41.6
≥ Master degree	61	11.3
Tenure in team (years)		
< 1	112	20.7
[1 – 5]	256	47.4
]5 – 15]	127	23.5
]15 – 25]	36	6.7
> 25	9	1.7

Annex 3: Team members questionnaire

Cód. Organização:	Cód. Equipa:	Cód. Individual:
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O presente questionário insere-se num estudo sobre os processos e os resultados dos grupos de trabalho em contexto organizacional. As questões que se seguem têm como objetivo conhecer as opiniões e atitudes dos elementos de cada equipa no que diz respeito a algumas situações que podem acontecer no seio das mesmas.

Todas as respostas que lhe solicitamos são rigorosamente anónimas e confidenciais. Responda sempre de acordo com aquilo que faz, sente ou pensa, na medida em que não existem respostas certas ou erradas.

Leia com atenção as instruções que lhe são dadas, certificando-se de que compreendeu corretamente o modo como deverá responder. **Note que as instruções não são sempre iguais.** Antes de dar por finalizado o seu questionário, certifique-se de que respondeu a todas as questões.

Muito obrigado pela colaboração!

Declaração de consentimento informado (Participante)

Declaro que tomei conhecimento e fui devidamente esclarecido/a quanto aos objetivos e procedimentos da investigação a realizar. Foi-me garantida a possibilidade de, em qualquer altura, recusar participar neste estudo sem qualquer tipo de consequências. Desta forma, aceito participar neste estudo e permito a utilização dos dados que, de forma voluntária, forneço, confiando nas garantias de confidencialidade e anonimato que me são asseguradas pela equipa de investigação, bem como na informação de que não serão tratados de forma individual e de que apenas serão utilizados para fins de investigação.

Confirmo

_____, ____ de _____ 2018

[Tempo estimado de preenchimento: cerca de 20 minutos]

PARTE 1**(Dados demográficos - para fins exclusivamente estatísticos)**

Idade: _____ Sexo: M F

Habilitações literárias: _____

Já teve formação em trabalho de equipa? Sim Não

Há quanto tempo trabalha nesta organização? Indique, por favor, o número de anos e meses ou de meses e semanas (por exemplo: 1 ano e 3 meses).

Há quanto tempo trabalha nesta equipa? Indique, por favor, o número de anos e meses ou de meses e semanas (por exemplo: 1 ano e 3 meses). _____

PARTE 2

Envolvimento no trabalho de equipa

As seguintes afirmações referem-se a sentimentos que os membros de uma equipa, no seu conjunto, têm em relação ao trabalho que desenvolvem. Indique em que medida concorda ou discorda de cada uma delas utilizando a seguinte escala de resposta:

Discordo Totalmente	Discordo Bastante	Discordo Ligeiramente	Não Concordo nem Discordo	Concordo Ligeiramente	Concordo Bastante	Concordo Totalmente
1	2	3	4	5	6	7

Na nossa equipa...

	1	2	3	4	5	6	7
1. Quando estamos a trabalhar sentimo-nos cheios de energia.							
2. Sentimo-nos com força e vigor quando estamos a trabalhar.							
3. Estamos entusiasmados com este trabalho.							
4. Este trabalho inspira-nos.							
5. Durante o trabalho, temos vontade de participar nas diversas atividades.							
6. Somos felizes quando estamos envolvidos neste trabalho.							
7. Estamos orgulhosos com o nosso trabalho nesta equipa.							
8. Estamos imersos no trabalho desta equipa.							
9. “Deixamo-nos levar” pelas atividades deste trabalho.							

Capital psicológico da equipa

Relativamente à **sua equipa de trabalho**, pedimos-lhe que indique em que medida concorda ou discorda das seguintes afirmações, assinalando com uma cruz (x) a opção que melhor se adequa, utilizando a seguinte escala (caso verifique que a situação descrita não se aplica, imagine-se numa situação hipotética e responda como acha que a sua equipa se sentiria/comportaria nessa situação):

1	2	3	4	5	6
Discordo fortemente	Discordo	Discordo em parte	Concordo em parte	Concordo	Concordo fortemente

Na nossa equipa...	1	2	3	4	5	6
1. ... sentimo-nos confiantes ao representar o nosso grupo de trabalho em reuniões com a administração.						
2. ... sentimo-nos confiantes ao contribuir para as discussões acerca da estratégia da organização						
3. ... sentimo-nos confiantes em ajudar a definir objetivos para a nossa área de trabalho.						
4. ... sentimo-nos confiantes ao estabelecer contacto com pessoas fora da empresa (por exemplo, clientes e fornecedores) para discutir problemas.						
5. ... sentimo-nos confiantes a apresentar informação a um grupo de colegas.						
6. ... neste momento, sentimos que estamos a perseguir ativamente os nossos objetivos de trabalho.						
7. ... para qualquer problema existem várias soluções.						
8. ... neste momento, consideramo-nos uma equipa muito bem-sucedida.						
9. ... conseguimos pensar em várias maneiras de alcançar os nossos objetivos de trabalho atuais.						
10. ... estamos, neste momento, a alcançar os objetivos de trabalho que definimos para a equipa.						
11. ... geralmente conseguimos gerir as dificuldades no trabalho, seja de uma forma ou de outra.						
12. ... se for necessário, somos capazes de trabalhar por nossa conta.						
13. ... em geral, costumamos lidar calmamente com as situações mais stressantes do trabalho.						
14. ... conseguimos ultrapassar os momentos difíceis do trabalho, pois já passámos anteriormente por dificuldades.						
15. ... sentimos que conseguimos lidar com várias coisas ao mesmo tempo.						
16. ... quando as coisas estão incertas, habitualmente esperamos o melhor.						
17. ... no que respeita ao nosso trabalho, olhamos sempre para o lado positivo das coisas.						
18. ... no que se refere ao trabalho, estamos otimistas acerca do que nos irá acontecer no futuro.						
19. ... no que respeita ao trabalho, consideramos que “há sempre luz ao fundo do túnel”.						

Annex 4: Leaders questionnaire

Cód. Organização:	Cód. Equipa:	Cód. Individual:
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O presente questionário insere-se num estudo sobre os processos e os resultados dos grupos de trabalho em contexto organizacional. As questões que se seguem têm como objetivo conhecer a forma como avalia a sua equipa de trabalho, em função de um conjunto de critérios.

Todas as respostas que lhe solicitamos são rigorosamente anónimas e confidenciais. Responda sempre de acordo com aquilo que pensa, na medida em que não existem respostas certas ou erradas.

Leia com atenção as instruções que lhe são dadas, certificando-se de que compreendeu corretamente o modo como deverá responder. Certifique-se que respondeu a todas as questões.

Muito obrigado pela colaboração!

Declaração de consentimento informado (Participante)

Declaro que tomei conhecimento e fui devidamente esclarecido/a quanto aos objetivos e procedimentos da investigação a realizar. Foi-me garantida a possibilidade de, em qualquer altura, recusar participar neste estudo sem qualquer tipo de consequências. Desta forma, aceito participar neste estudo e permito a utilização dos dados que, de forma voluntária, forneço, confiando nas garantias de confidencialidade e anonimato que me são asseguradas pela equipa de investigação, bem como na informação de que não serão tratados de forma individual e de que apenas serão utilizados para fins de investigação.

Confirmo

_____, ____ de _____ 2018

[Tempo estimado de preenchimento: cerca de 7 minutos]

PARTE 1

(Dados demográficos - para fins exclusivamente estatísticos)

Idade: _____ Sexo: M F

Habilitações literárias: _____

Há quanto tempo trabalha nesta organização? Indique, por favor, o número de anos e meses ou de meses e semanas (por exemplo: 1 ano e 3 meses).

Informação relativa à organização:

Nº. de trabalhadores da organização: Até 10 11- 49 50 – 249 250 ou mais

Sector de atividade da organização: _____

Informação relativa à equipa:

Há quanto tempo se formou a sua equipa? Indique, por favor, o número de anos e meses ou de meses e semanas (por exemplo: 1 ano e 3 meses). _____

Há quanto tempo lidera esta equipa? Indique, por favor, o número de anos e meses ou de meses e semanas (por exemplo: 1 ano e 3 meses). _____

Nº de elementos da sua equipa (considere somente os elementos da equipa, não se incluindo a si próprio): _____

Qual é a principal atividade da sua equipa? [assinale a resposta]

- Produção Comercial Serviços Projeto
 Administrativa Gestão Outra.

Qual? _____

PARTE 2

Inovação Grupal

O conjunto das seguintes afirmações tem como objetivo continuar a **caracterizar a sua equipa de trabalho**. Neste sentido, diga, por favor, em que medida cada uma delas se aplica à equipa que lidera. Assinale com uma cruz (x) o valor que melhor se adequa ao que lhe é apresentado em cada afirmação, utilizando a seguinte escala:

Discordo Totalmente	Discordo Bastante	Discordo Ligeiramente	Não Concordo nem Discordo	Concordo Ligeiramente	Concordo Bastante	Concordo Totalmente
1	2	3	4	5	6	7

1. A equipa é altamente inovadora.							
2. A equipa é rápida na adoção de soluções novas e inovadoras.							
3. A equipa introduz com frequência soluções novas e inovadoras.							