Team autonomy and team effectiveness in an organizational context: The mediating role of team learning behaviours

Josef Bader
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. Rita Berger
Facultat de Psicologia – Universitat de Barcelona
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**Author:**
Josef Bader
Faculdade de Psicologia e de Ciências da Educação Universidade de Coimbra
josefbader@hotmail.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. Rita Berger
Facultat de Psicologia
Universitat de Barcelona
ritaberger@ub.edu
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Abstract

Team autonomy, understood as the degree of discretion and freedom that a team presents when deciding how to carry out tasks, is often seen as a critical and a desirable trait for a team in organizational settings. Thus, the influence that autonomy exerts over team’s dynamics (team processes and/or team emergent states) and also over team effectiveness is a growing field of interest to organizational researchers. Based on the Input Mediator Output Input model (IMOI) as a framework (Ilgen et al., 2005; Koslowski & Ilgen, 2006), this research aimed to be a contribution to clarifying the relationship between team autonomy and team effectiveness, considering the role of team learning behaviours in this relationship. Adopting a cross-sectional design and a group level analysis, a model was tested including team autonomy as the input, team learning behaviours (conceptualized as a group process) as the mediator and team effectiveness (measured by the criteria of team performance, team viability, quality of team experience, and team process improvement) as the output. The sample was composed by 90 teams (including 90 team leaders and 445 team members), from 40 Portuguese organizations. To analyze the data, regression analysis, namely the product of coefficients method, proposed by MacKinnon, Lockwood, Hoffman, West and Sheets (2002) was used. The results showed a positive relationship between team autonomy and team learning behaviours, a positive relationship between team learning behaviours and each one of the criteria of team effectiveness and also a full mediation of team learning behaviours in the relationship between team autonomy and team effectiveness. Results are discussed considering their contribution both at a research and at an intervention level. Limitations and indications for further research are also presented.

Keywords: Teams; Team Autonomy; Team Effectiveness; Team Learning Behaviours

1. State of Art

As a society, we organize ourselves on a group basis with the purpose of performing complex and varied tasks effectively. In this way, the importance of working in teams is currently relevant and understanding how teams succeed in their role becomes a pertinent topic to be addressed. In an organizational setting, psychological factors may enhance the effectiveness of teams (Campion, Medsker, & Higgs, 1993; Gladstein, 1984;  

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1 Following authors Allen and Hecht (2004) we use the words group and team interchangeably.
Kayes & Burnett, 2006). It is of interest to researchers to unfold these factors and to explore their potential impact on teams and in turn on teams’ ability to achieve goals.

Team autonomy has been showed to present a positive relation with team processes/team emergent states (e.g., team decision processes, team members’ affective reactions) and team effectiveness (Cohen & Ledford, 1994; Cohen, Ledford, & Spreitzer, 1996; Janz, 1999; Langfred & Moye, 2004; Macy & Izumi, 1993, Spreitzer, Cohen, & Ledford, 1999; van Mierlo, Rutte, Kompier, & Doorewaard, 2005). Moreover, considering a group as a dynamic system, team learning behaviours become another important factor to be considered. In fact, team learning behaviours affect team effectiveness playing a mediating role in the relationship between other variables and team effectiveness (Edmondson, 1999; Zellmer-Bruhn & Gibson, 2006). In spite of its relevance in group functioning and, also, in group results, to the best of our knowledge, there is no studies that have addressed in articulately the relationship of team autonomy, team learning behaviours, and team effectiveness. As a result, the current study aims to contribute to filling this gap and so providing further insight on the link between team autonomy and team effectiveness by examining how team learning behaviours mediate this relationship.

In order to achieve this intent, a literature review is presented involving the constructs of interest: team autonomy, team learning behaviours, and team effectiveness. The empirical study follows including a statement of objectives, model under analysis and research hypotheses. The results obtained are stated, including also a discussion of the main results, the limitations of the study and suggestions for future research.

2. Autonomy in Organizational Teams

Autonomy is a construct that is of large focus for researchers today (Rico, de la Hera, & Urbieta. 2011). The literature shows that autonomy has been often listed as an important construct linked to team effectiveness as it brings benefits to teams by promoting for instance higher performance, favourable behaviours, and attitudes (Campion, Medsker, & Higgs, 1993; Gladstein, 1984). Moreover, as working in teams has become a major reality in organizations, the need for flexible and rapid structures make autonomy a relevant topic to the scientific community.

As understood by the literature review, in the bounds of team context, autonomy refers to the degree of discretion and freedom that a team presents when deciding how to carry out tasks (Langfred, 2000, 2005; Stewart & Barrick, 2000). In addition, autonomy can be approached as “the extent to which the team can take over the execution of its own
work” (Toskov & Mantarova, 2015, p. 106) regarding their objectives, work methods, planning issues, and distribution of work (Molleman, & Slomp, 2006). In this way, autonomy can be seen both in terms of “amount” as in how much autonomy exists within a team as well as in terms of “type” regarding decisions to be made about people, processes, products, and planning (Janz, Colquitt, & Noe, 1997).

Teams that are given autonomy are generally able to make decisions on their own, getting to participate as a unit and managing their own internal process (Cohen & Ledford, 1994). Teams with autonomy are believed to be more functional as they get to respond more effectively to challenges and are better adjustable to the changing world. Lacking autonomy is generally reflected on power being centralized by the organization and symbolizing highly structured tasks while minimizing the possibility of team members to partake and decide on issues relevant to them. Lacking autonomy may also prevent team members from developing motivation, as they are not able to engage in self-management and to perform their tasks (Cohen & Ledford, 1994).

In this way, in the context of teams in an organizational setting, autonomy can be understood as being part of a continuum. In this continuum, one extreme encompasses teams that demonstrate a high level of autonomy thus permitting them to engage in self-management (having the possibility to elect their own leaders and organize their work) and/or self-design (having the possibility to decide about their work, and external relations as part of a unit). On the other extreme of the continuum, teams demonstrate a low level of autonomy and so are characterized as being “traditional” meaning that the figure of a leader is essential in order to promote task execution and goal achievement. Such leader is involved in aligning team members with a task, instructing on what should be done, and further directing on how to do so accordingly (Dimas, Alves, Lourenço, & Rebelo, 2016).

Providing teams with autonomy can be seen as advantageous as it allows for several benefits including flexibility, creativity, reduced supervision costs, and team cohesion (Parker & Williams, 2001). Indeed, the scientific literature shows that team autonomy can promote team effectiveness in an organizational context. It is important to highlight, however, that autonomy has not always been seen as beneficial for a team’s functioning. For instance, having autonomy can be detrimental in situations where team members are not capable of managing themselves or their tasks (Langfred, 2007).

Moreover, it is to note that other factors can also play a role in the relationship between team autonomy and team effectiveness. Such factors when present may contribute to explaining the existing link between team autonomy and team effectiveness. For
instance, previous research has addressed the influence of team commitment in the link involving team autonomy and team effectiveness (von Bonsdorff, Janhonen, Zhou, & Vanhala, 2015). Additionally, the role of team knowledge, skills, and abilities (KSAs) have showed to play a role in the relationship between team autonomy and team effectiveness (Leach, Wall, Rogelberg, & Jackson, 2005).

In order to contribute to enriching previous research, we aim to understand the relationship between team autonomy and team effectiveness by analyzing the influence of team learning behaviours. Therefore, in the present study, team learning behaviours are examined as a mediating variable in the relationship between team autonomy and team effectiveness.

As previously mentioned, teams with autonomy participate in a dynamic process in which they are not only entitled to but they also engage in making decisions on issues that are relevant to them. As this dynamic process unfolds, team members get to learn from the events and experiences they go through, for instance, by using flexibility and proactivity in problem-solving (Druskat & Kayes, 1999). In this way, the link between team autonomy and team learning behaviours seems evident and so it may further impact team effectiveness considering that the literature has showed the influence of team learning on team effectiveness (e.g., Chan, Lim, & Keasberry, 2003; Kayes & Burnett, 2006).

3. Team Learning Behaviours

As members of a team interact with one another and perform tasks, they acquire insight from their experiences. In this way, we can understand team learning behaviours as the continuous process of reflection and action, characterized by asking questions, seeking feedback, experimenting, reflecting on results, and discussing errors or unexpected results of previous actions (Edmondson, 1999; van der Haar, Segers, & Jehn, 2013; Wilson, Goodman, & Cronin, 2007; Yorks, Marsick, Kasl, & Dechant, 2003).

Through this cognitive and social process, team learning behaviours allow for team members to acquire, share, combine and apply knowledge making it “embedded within the team” or “captured collectively as a pool” (Argote, Gruenfeld, & Naquin, 1999; Argote & Olivera, 1999; Kozlowski & Ilgen, 2006). As a result, team learning behaviours is an important construct to be studied and highly relevant in the organizational context considering that organizations are today centered in meeting the demands of knowledge management (Kayes & Burnett, 2006).
Several are the ways in which team learning behaviours can emerge. Wong (2004) suggests that team learning behaviours can occur locally as in learning from within the team itself and/or distally as in learning from the environment, the one external to the team. Additionally, team learning may also emerge as team members learn from the minority in the team and/or when team members learn from the team’s best member (Ilgen, Hollenbeck, Johnson, & Jundt, 2005).

As it promotes knowledge of team members and an enrichment of their lived experience, team learning behaviours may be directly linked to team effectiveness (Kayes & Burnett, 2006). For instance, van Der Vegt and Bunderson (2005) show that in Norway’s oil and gas industry, learning behaviours of teams by means of asking questions and examining the work process led to the team’s improved performance. Moreover, in another study, team learning behaviours by means of focusing on source of information, work processes, and procedures were positively associated with team performance in management teams (Bunderson & Sutcliffe, 2003). As the literature indicates, the work environment today is characterized by its fast-pace; consequently, teams in organizations are required to engage in learning behaviours in order to make sense of situations and so to take action (Edmondson, 1999). Thus, in the long run, team learning behaviours contribute to teams’ positive outcomes by enhancing a sense of adaptability and achievement of increased performance (Edmondson, 1999; Wilson, Goodman, & Cronin, 2007; Yorks, Marsick, Kasl, & Dechant, 2003).

Nonetheless, team learning behaviours can also have a detrimental effect on team effectiveness when considering it on a short term basis. In short term periods, team learning behaviours can contribute to narrowing the focus of teams and having them emphasize aspects of competence and development when in reality their focus should have remained towards task execution (Bunderson & Sutcliffe, 2003). In this way, team learning behaviours may contribute to reducing team effectiveness as teams focus on low priority issues when taking into account the short-term nature of task execution.

Team learning behaviours have also received the attention of researchers due to their role as a mediating variable. The literature shows that team learning behaviours can act as a mediator between other variables such as psychological safety and performance, as well as quality of relations of team members and performance (Edmondson, 1999; Zellmer-Bruhn & Gibson, 2006). Given the mediating role of team learning behaviours, we are driven to pursue further investigation and examine team learning behaviours as a
mediator in the relationship between the constructs of team autonomy and team effectiveness.

4. Team Effectiveness

Effective teams are generally characterized as teams including satisfied members with an overall sense of team viability and driven by the spirit of innovation when performing tasks (Kozlowski & Ilgen, 2006). As a result, through team effectiveness, organizations get to achieve their goals and in turn sustain their own viability and their advantage as a strong competitor in their acting market. Team effectiveness is then a central element in the world of organizations (Kozlowski & Bell, 2013).

Considering the relevance of team effectiveness in organizational settings, it is important to take a comprehensive review of the scientific literature by means of theoretical models proposed by researchers in the field. Such theoretical models have helped scientists to better illustrate the role that different variables play in team effectiveness.

A theoretical reference used to describe team effectiveness is known as the Input-Process-Output model, commonly abbreviated as I-P-O (McGrath, 1964). In this model, the hyphens that separate each letter refer to a linear and sequential order in which a progression occurs up to team effectiveness. This model, however, has proved to be insufficient as knowledge on the construct of team effectiveness has advanced through the years (Moreland, 1996). For example, as described previously, the hyphens in the model, emphasize a single and linear progression not taking into account issues such as the multiple relations between the variables and also the feedback loop. Moreover, temporal factors are relevant to team effectiveness but are not explicitly considered in this model (Mathieu, Maynard, Rapp, & Gilson, 2008). Finally, many of the factors that promote the transfer from inputs to outputs are not just (group) processes but also emergent states that can act as mediating mechanisms. As explained by Marks, Mathieu and Zaccaro (2001), group processes correspond to interactive and interdependent actions of team members during the transition of inputs to outputs. On the other hand, emergent states are not processes but dynamic and context-dependent properties and qualities of the team that describe states of cognition, affection, and motivation.

A subsequent model, known as the Input Mediator Output Input or simply IMOI fulfils the limitations of the I-P-O (Ilgen et al., 2005; Kozlowski & Ilgen, 2006). In the IMOI model, the letter “M” incorporates all the mediating mechanisms, including group processes and emergent states and so permitting a team to be conceived as an adaptive
system that combines its resources (inputs) and different processes and/or emergent states (mediators) in order to reach effectiveness (output). The last “I” in IMOI, refers to a feedback cycle with continuity and recycling, meaning that an output leads to a new input. The absence of the hyphens, makes the IMOI a model that approaches team effectiveness as a construct of non-linear flow with several interactions between variables and not necessarily a direct causal link. (Ilgen et al., 2005). The IMOI also takes into account temporal factors both episodically and longitudinally (Mathieu et al., 2008).

Additionally, through the IMOI model, team effectiveness is explicitly approached as multidimensional and thus measured by “multiple criteria”. This fits with the current perspectives/approaches of team effectiveness. In fact, team effectiveness is referred by the literature as being made up of different dimensions (Beaudin & Savoie, 1995; Gil, Rico, & Sanchez-Manzanares, 2008; Hackman, 1987; Rico et al., 2011; Savoie & Beaudin, 1995; Savoie, Larivière, & Brunet, 2006). Hence, team effectiveness incorporates aspects that deal with economic, social, perennial, and innovative dimensions (Aubé & Rousseau, 2005; Rico, Alcover de la Hera, & Tabernero, 2011; Rousseau & Aubé, 2010). The economic dimension includes the most frequent criteria used to measure team effectiveness. It reflects aspects of productivity and achievement of goals related to team tasks. A way that this dimension can be measured is by evaluating the performance of teams through their tasks (Lourenço, Miguez, Gomes, & Carvalho, 2004). The social dimension in its turn is related to a range of criteria involving team members’ sense of well-being. Some of them include: support in the workplace, quality of team experience, and the satisfaction of team members. Regarding the perennial dimension, it is linked to the processes of adaptability and stability and points to the team’s viability or the degree to which team members want to remain together as part of a working unit. Finally, a dimension invoking innovation is characterized by the team’s ability to implement new internal processes and to reflect on results of previous tasks performed in order to innovate. Innovation of teams can be analyzed by measuring team process improvement.

Team effectiveness is also context dependent or “not context-free” meaning that it is contingent upon situational factors such as the subjectivity of its evaluation. For instance, when taking into account the meaning of effectiveness, each evaluator may perceive “effectiveness” differently as his or her interpretations are rooted on his or her own values, expectancies and representations (Lourenço, 2002).

In our study, following the work developed by Aubé and Rousseau (2005) and Rousseau and Aubé (2010), the multidimensionality of team effectiveness is considered in
terms of, team performance, team viability, quality of team experience and team process improvement, thus incorporating effectiveness in its social, economic, perennial, and innovative dimensions, respectively.

5. Objective, Model under analysis and Research Hypotheses

As referred in the previous sections, the literature points that team autonomy can be understood as an input or a resource present at the team level to be utilized by teams for task execution and to achieve goals (Rico et al., 2011). In this way, we can say that team autonomy is an antecedent of team effectiveness. The literature also points that a) team learning behaviours affect team outcomes and b) is affected by team autonomy. Therefore, team learning behaviours can be understood as a mediator (or more specifically a group process playing the role of mediator), functioning as an interactive coordinating mechanism between team autonomy and team effectiveness. Considering the relationships among the variables addressed, the objective of our study is to analyze the (positive) mediating role of team learning behaviours in the relationship between team autonomy and team effectiveness.

In this way, in order to further analyze the relationships among the variables under study, based on the IMOI model (Ilgen et al., 2005; Kozlowski & Ilgen, 2006)\(^2\), we tested a mediating model in which team autonomy is the input, team learning behaviours (as a process) is the mediator, and team effectiveness (conceived as a multidimensional construct and measured by four criteria: team performance, team viability, quality of team experience, and team process improvement) is the output (cf. Figure 1).

![Figure 1](image.png)

**Figure 1. Model under analysis (Based on Ilgen et al., 2005; Kozlowski & Ilgen, 2006)**

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\(^2\) Given the cross-sectional nature of this study, we are aware that the potentialities of this model are not fully explored.

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Josef Bader (e-mail: josefbader@hotmail.com) 2016
Regarding the model under study, we propose the following research hypotheses:

**H1.** Team autonomy is positively associated with team learning behaviours.

**H2a.** Team learning behaviours are positively associated with team performance.

**H2b.** Team learning behaviours are positively associated with team viability.

**H2c.** Team learning behaviours are positively associated with quality of team experience.

**H2d.** Team learning behaviours are positively associated with team process improvement.

**H3a.** Team learning behaviours mediate the relationship between team autonomy and team performance.

**H3b.** Team learning behaviours mediate the relationship between team autonomy and team viability.

**H3c.** Team learning behaviours mediate the relationship between team autonomy and quality of team experience.

**H3d.** Team learning behaviours mediate the relationship between team autonomy and team process improvement.

### 6. Method

This research is non-experimental, cross-sectional and adopts a group level analysis.

#### 6.1 Sample:

Following Lourenço, Dimas and Rebelo (2014), the criteria for selecting teams were: (1) teams must be constituted at least by 3 members, (2) who are perceived by themselves and by non-members as a team, and (3) who interact regularly, in an interdependent way, to accomplish a common goal.

The study included a sample made up of 90 working teams belonging greatly to medium-sized Portuguese organizations\(^3\) (42.2 %). Small and Large-sized organizations each corresponded to 16.7% and micro-sized organizations to 14.4%. The organizations were from different sectors (e.g., services, consulting, commerce) and the area of production (12.6%) was the most represented, followed by the technical areas (11.9%) and by sales (11.2%).

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\(^3\)According to the Portuguese Labour Code n.º 7/2009, from February 12, Article 100., medium-sized organizations consist of 50 to less than 250 employees. Large-sized and small-sized organizations consist of more than 250 employees and between 10 to less than 50 employees, respectively. Micro-sized organizations consist of less than 10 employees.
The 90 teams (445 team members and 90 team leaders) of our sample belonged to a total of 40 organizations. Teams were composed by 3 to 27 members, with an average of approximately seven members per team (M = 6.66, SD = 5.16). Team members aged between 18 and 67 years (M = 35.49; SD = 10.03), being 226 females (50.8%) and 201 males (45.2%). Team leaders aged between 18 and 67 (M = 39.38; SD = 9.91), being 28 females (31.1%) and 55 males (61.1%). It is to note that 4.0% of team members and 7.8% of team leaders did not respond to the question regarding their sex.

Regarding educational level, 44.4% of team leaders and 36.2% of team members had a high school diploma, 27.8% of leaders and 23.4% of team members had a university degree, while 8.9% of team leaders and 1.1% of team members did not respond to the question about their educational level.

The team member’s tenure in the organization corresponded approximately to 9 years (M = 8.79, SD = 8.46) ranging from less than a year to 43 years while the team leader’s tenure in the organization was close to 14 years (M = 13.71, SD = 7.76) ranging from less than a year to 34 years. The team member’s tenure in the team corresponded approximately to 5 years (M = 5.30, SD = 5.71) ranging from less than a year to 33 years while the team leader’s tenure in the team corresponded approximately to 8 years (M = 7.94, SD = 6.96) ranging from less than a year to 34 years. Finally, the face-to-face daily interaction of team members with one another corresponded closely to 5 hours (M = 5.17, SD = 2.82).

6.2 Data Collection Procedure:

Data for this study were collected by our research team between November 2014 and April 2016\(^4\). Convenience sampling combined with a snowball sampling was used in order to gather information both in physical presence of the participants or over distance through online questionnaires (Hill & Hill, 2012).

As aforementioned, the data were collected from team leaders and team members. Team leaders would respond to one questionnaire lasting up to five minutes while team members would respond to another kind of questionnaire lasting from twenty up to twenty-five minutes. In order to gain access to the sample, the research team utilized a personal contact approach to reach a representative of different organizations orally and by writing.

\(^4\) Beside our contribution and the contribution of our colleagues’ in the Master’s WOP 2015-2017 (Nicola Paolucci and Pedro Maia), also members of our research team, data had also been collected by van Beveren (2015), Albuquerque (2016), Pessoa (2016), Aniceto (2016), and Martins (2016).
In a following stage, an e-mail containing a letter of presentation (cf. Appendix A) was sent to the interested organizations to which the research team presented the research project (cf. Appendix B), its possible impact as well as the type of collaboration and data collection that were intended. The interested organizations were contacted and with their approval, general instructions and conditions were debriefed to the representative from each entity so to ensure that the questionnaire application would take place following the ethical guidelines of psychological research (all participants provided their informed consent and the research team assured the confidentiality of the data and the anonymity of the participants). It is important to point out that the research team committed to not making use of any individual result but only at a group level. In cases in which the questionnaire was applied online, e-mail addresses of participants were not published in any circumstance.

6.3 Measures:

In this study, the following are the measuring instruments used: a) Team-Level Autonomy scale (TLA) by Langfred (2005), Team Learning Behaviors’ Instrument, developed by Savelsbergh, van der Heijden and Poell (2009), Quality of Group Experience scale by Aubé and Rousseau (2005), which were applied to team members and measure respectively, team autonomy, team learning behaviors and the social dimension of team effectiveness; b) Team Performance and Team Process Improvement scales by Rousseau and Aubé (2010), as well as the Team Viability scale by Aubé and Rousseau (2005), which were applied to team leaders and measure respectively, the economic, innovative, and perennial dimensions of team effectiveness.

a) Team autonomy is measured in the study through the Team-Level Autonomy Scale (TLA) developed by Langfred (2005) in its Portuguese version adapted by van Beveren (2015). The scale is used in order to evaluate the perception that team members have regarding the degree of team autonomy in several aspects of their work. The Portuguese version of the TLA involves seven from the original eight items (e.g., “the team is free to decide on how to carry out tasks”). Team members responded to these items following a Likert-type scale in which the lowest value (1) corresponds to “almost not applicable” and the highest value (5) corresponds to “almost completely applicable” (cf. Appendix D). The results of the construct validity study conducted by van Beveren (2015), namely through confirmatory factor analysis of the TLA (Portuguese Version), pointed to a satisfactory adjustment between the data and the one-dimensional hypothetical model ($\chi^2 = 37.29$, $p < .001$, $df = \ldots$).
b) **Team learning behaviours** were measured in the study through *Team Learning Behaviors’ Instrument*, developed by Savelbergh et al., (2009) in its Portuguese version adapted by Dimas et al., (2016). This scale aims to measure the perception that team members have regarding the learning process during their involvement in tasks. The scale in the Portuguese version is composed of twenty-five out of the twenty-eight items found in the original scale (e.g., “information is collected by each team member and complemented with information collected by other team members’) (cf. Appendix D). Team members responded to these items following a Likert-type scale in which the lowest value (1) corresponds to “almost not applicable” and the highest value (5) corresponds to “almost completely applicable”. The study of the construct validity, namely the dimensional analysis, conducted by Dimas et al., (2016) through principal component analysis pointed to five factors explaining 77.47% of the total variance. All communalities were above .60 and all items presented factor loadings above .50. Cronbach’s alpha for the dimensions of this scale ranged between .73 and .95. A confirmatory factor analysis conducted by Aniceto (2016) provides further strength to the construct validity of this scale. However, in her study, Aniceto (2016) used the global score of the scale as a second order factor considering that she observed high correlations between the dimensions (ranging from .63 and .84). Her confirmatory studies showed a satisfactory adjustment between the data and the hypothetical model: $\chi^2(270) = 1334.50, p < .001, \chi^2/df = 4.94, CFI = .93, RMSEA = .08$. All the factor loadings of the dimensions in the second order factor were above .79. Despite the referred author not having estimated the alpha for the whole scale (since, as she explained, the five dimensions showed satisfactory loadings in the second order factor), the alpha values for each one of the dimensions of the construct ranged from .88 to .95.

c) **Team effectiveness** was measured in the study through:

- The *Quality of Group Experience Scale*, developed by Aubé and Rousseau (2005) in its Portuguese version adapted by Albuquerque (2016). This scale is used in order to evaluate the perception that team members have regarding the quality of the social climate within the team. The scale comprises three items (e.g., “within our team, the work climate is good”). Team members responded to those respective items following a Likert-type scale in which the lowest value (1) corresponds to “I strongly disagree” and the highest value (5).
corresponds to “I strongly agree” (cf. Appendix D). Albuquerque (2016) conducted a study of the dimensionality of the scale through principal component analysis. The results pointed to a retention of one factor explaining 90.82% of the total variance with an eigenvalue of 2.72. All items presented factor loadings above .94. Cronbach’s alpha for this scale corresponded to .95. Aniceto (2016) in a new study with 117 teams obtained a Cronbach’s alpha of .94. Due to the fact that this scale only has 3 items, which implies a saturated model, both referred authors did not conduct confirmatory procedures.

- A questionnaire responded by team leaders involving the Portuguese versions of three scales: 1) Team Performance Scale, developed by Rousseau and Aubé (2010); 2) Team Viability Scale, developed by Aubé and Rousseau (2005); 3) Team Process Improvement Scale, also developed by Rousseau and Aubé (2010).

The Team Performance Scale aims to evaluate the perception that team leaders have regarding the performance of their teams by means of goal accomplishment, productivity, quality of work accomplished, and issues of deadlines and expenses. The Portuguese version of the scale was adapted by Albuquerque (2016) and comprises five items (e.g., “achievement of performance goals”). Team leaders responded to the items on team performance following a Likert-type scale in which the lowest value (1) corresponds to “very low” and the highest value (5) corresponds to “very high” (cf. Appendix C). Albuquerque (2016) conducted a study of the dimensionality of the scale through principal component analysis. The results pointed to a retention of one factor explaining 58.75% of the total variance with an eigenvalue of 2.94. All items presented factor loadings above .64. Cronbach’s alpha for this scale corresponded to .81. A confirmatory factor analysis conducted by Aniceto (2016) provided further insight to the Portuguese version. The results showed a good fit between the data and the hypothetical one-dimensional model: \[\chi^2 (3) = 2.90, p = .41, CFI=1.00, \text{RMSEA}=0.00\]. The factor loadings of items were all above .50 and the Cronbach’s alpha value was .83.

The Team Viability Scale was used in order to analyze the perception that team leaders have regarding the ability of the team to adapt to internal and external changes, solve problems, integrate new members and continue to work as a team in the future. The Portuguese version of the scale was adapted by Albuquerque (2016), and comprises four items (e.g., “team members adapt themselves to changes in the workplace”) following a Likert-type scale in which the lowest value (1) corresponds to “almost not applicable” and
the highest value (5) corresponds to “almost completely applicable” (cf. Appendix C). Albuquerque (2016) conducted the study of the dimensionality of the scale through principal component analysis. The results pointed to a retention of one factor explaining 56.72% of the total variance with an eigenvalue of 2.26. All items presented factor loadings above .68. Cronbach’s alpha for this scale corresponded to .74. A confirmatory factor analysis conducted by Aniceto (2016) provides further strength to the construct validity of this scale considering the results obtained: $\chi^2(2) = 1.88, p = .39, \text{CFI}=1.00, \text{RMSEA}=.00]$. The factor loadings of items were all above .56 and the Cronbach’s alpha value was .72.

The Team Process Improvement Scale is used to evaluate the perception that team leaders have related to the degree to which the team improves its current working process and develop innovative solutions to attain better task results. The Portuguese version of the scale was adapted and validated by Albuquerque (2016), and comprises five items (e.g., “new ways of working have helped to achieve performance goals”) following a Likert-type scale in which the lowest value (1) corresponds to “almost not applicable” and the highest value (5) corresponds to “almost completely applicable” (cf. Appendix C). Albuquerque (2016) conducted a study of the dimensionality of the scale through principal component analysis. The results pointed to a retention of one factor explaining 70.20% of the total variance with an eigenvalue of 3.51. All items presented factor loadings above .82. Cronbach’s alpha for this scale corresponded to .89. A confirmatory factor analysis conducted by Aniceto (2016) provided further strength to the construct validity of this scale. Her results showed a satisfactory adjustment between the data and the hypothetical one-dimensional model: $\chi^2(4) = 6.43, p = .17, \text{CFI}=.99, \text{RMSEA}=.07]$. The factor loadings of items were all above .71 and the Cronbach’s alpha value was .86.

7. Results

In this section, statistical procedures and hypotheses testing will be presented. IBM SPSS Statistics 22 was used for carrying out the process.

7.1 Statistical Procedures:

The first approach taken regarding statistical procedures involved an analysis of the missing-values from the data collected. This procedure was only conducted for responses from team members because no missing values were detected in the questionnaire.
responded by team leaders. Considering that missing values were less than the cut off value of 10% we did not exclude any case from the data base (Bryman & Cramer, 2004).

In order to decide on the missing values imputation method, we analyzed the distribution of the missing data conducting the Little’s MCAR test with the aim of contrasting the hypothesis of the missing values being at random (Little, 1988). Results obtained showed that for all scales, their p-value are below the .05 level of significance. Thus, we rejected the assumption that the missing values were distributed at random which directed us to use the Expectation-Maximization (EM) technique in order to impute missing values (Dempster, Laird, & Rubin, 1977).

In order to analyze the psychometric properties of each one of the scales used in the present study, (considering that the scales have already been adapted to Portuguese language and also showed validity evidences), we only analyzed the reliability, namely the internal consistency through the Cronbach’s alpha estimation (Cronbach, 1951). As seen in Table 1, all values found were above the cut off of .70 indicated by the literature (Nunnally, 1978).

Table 1 – Scales Reliability

<table>
<thead>
<tr>
<th>Scale</th>
<th>Cronbach’s Alpha(α)</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Autonomy</td>
<td>.90</td>
<td>7</td>
</tr>
<tr>
<td>Team Learning Behaviours5</td>
<td>.97</td>
<td>25</td>
</tr>
<tr>
<td>Team Performance</td>
<td>.84</td>
<td>5</td>
</tr>
<tr>
<td>Team Viability</td>
<td>.75</td>
<td>4</td>
</tr>
<tr>
<td>Team Process Improvement</td>
<td>.85</td>
<td>5</td>
</tr>
<tr>
<td>Quality of Team Experience</td>
<td>.94</td>
<td>3</td>
</tr>
</tbody>
</table>

Furthermore, because data were collected from team members as individuals and the research is focused on team level, for all the scales answered by the team members a procedure of data aggregation was conducted by calculating the average scores obtained by team members for each scale. In order to justify this procedure, we used the ADM, or Average Deviation Index (Burke, Finkelstein, & Dusig, 1999). As we can see in Table 2, the mean for Team Autonomy, Team Learning Behaviours and Quality of Team Experience are 0.53, 0.52, 0.40, respectively. Considering that those values are below the cut off value of 0.836, following authors Gamero, Gonzalez Romá and Peiró (2008), we conclude that data aggregation from an individual to a team level is warranted.

5 It is to note the Cronbach’s Alpha values for each of the dimensions of Team Learning Behaviours: asking questions (α= .92), discussing errors or unexpected results (α = .95), reflection on results (α = .93), seeking feedback (α = .87) experimenting (α = .94).

6 In all three instruments, the scale ranges from 1 to 5, the cut off is defined by the formula C/6, where C is the points of the scale (Burke, Finkelstein, & Dusig, 1999), for all scales the cut off point is 0.83.
In order to test the hypotheses, we previously analyzed the correlations between the variables which we included in the model under analysis. We also included the variable “team size”, to be used as a control variable, because the literature shows that team size has an influence on the functioning and outputs of teams (Brewer & Kramer, 1986).

Multiple regression analysis with mediation was conducted in order to test our hypotheses. The mediation test followed the product of coefficients method suggested by MacKinnon et al., (2002). According to the referred method, a mediation exists if (a) the predictor variable is significantly associated with the mediator (α being statistically significant); (b) the mediator is significantly associated with the criterion variable, after controlling for X (β statistically significant); and (c) the mediating effect is statistically significant (product of αβ is significant). The test of regression assumptions for each one of the conducted regressions, namely absence of multicollinearity, linearity, normality and residuals’ independence and homoscedasticity revealed satisfactory results (Tabachnick & Fidell, 2001).

7.2 Hypotheses Testing:

Table 3 contains the results obtained regarding the correlations between the variables under study.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Team Autonomy</td>
<td>90</td>
<td>3.48</td>
<td>0.56</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Quality of Team Experience</td>
<td>90</td>
<td>4.06</td>
<td>0.58</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Team Performance</td>
<td>90</td>
<td>4.05</td>
<td>0.58</td>
<td>.52***</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Team Viability</td>
<td>90</td>
<td>4.05</td>
<td>0.57</td>
<td>.33***</td>
<td>.37***</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Team Process Improvement</td>
<td>90</td>
<td>3.88</td>
<td>0.63</td>
<td>.30**</td>
<td>.39***</td>
<td>.66***</td>
<td>.56***</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Team Learning Behaviours</td>
<td>90</td>
<td>3.54</td>
<td>0.52</td>
<td>.69***</td>
<td>.67***</td>
<td>.49***</td>
<td>.45***</td>
<td>.46***</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>7. Team Size</td>
<td>82</td>
<td>6.66</td>
<td>5.16</td>
<td>-.42***</td>
<td>-.35**</td>
<td>-.12</td>
<td>-.09</td>
<td>-.18</td>
<td>-.40***</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: ** p < .01 *** p < .001

As seen in table 3, Team autonomy correlates statistically significant with team learning behaviours and also with all the criteria variables (team effectiveness dimensions). Team learning behaviours also correlate with the criteria variables. On the other hand, team size (control variable) correlates statistically significant with team autonomy, quality of team experience, and team learning behaviours. Thus, the control variable was subsequently used in the analysis of hypotheses H1, H2c, and H3c (Becker, 2005).
In order to test hypothesis H1, a hierarchical regression analysis was conducted taking into account the control variable. A two-step process was used. The control variable was included in the first step and team autonomy was included in the second step. As predicted by hypothesis H1, a positive relationship between team autonomy and team learning behaviours was found ($\alpha = .65$, $p < .001$) (cf. Table 4). Therefore, H1 was empirically supported.

<table>
<thead>
<tr>
<th>Table 4 – Hierarchical Regression Analysis of Team Autonomy as a predictor of Team Learning Behaviours (N=82)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constructs</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td><strong>Step 1</strong></td>
</tr>
<tr>
<td>Team Size</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
</tr>
<tr>
<td>Team Size</td>
</tr>
<tr>
<td>Team Autonomy</td>
</tr>
</tbody>
</table>

Note: *** $p < .001$

According to hypothesis H2a, we predicted a positive relationship between team learning behaviours and team performance ($\beta = .38$, $p = .004$). Therefore, the hypothesis H2a was supported (cf. Table 5).

According to hypothesis H2b, we predicted a positive relationship between team learning behaviours and team viability ($\beta = .43$, $p = .002$). This hypothesis was also supported (cf. Table 5).

<table>
<thead>
<tr>
<th>Table 5 – Regression Analysis of the Mediating Role of Team Learning Behaviours (N=90)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Dependent Variable: Team Performance</td>
</tr>
<tr>
<td>Team Autonomy</td>
</tr>
<tr>
<td>Team Learning Behaviours</td>
</tr>
<tr>
<td>Dependent Variable: Team Viability</td>
</tr>
<tr>
<td>Team Autonomy</td>
</tr>
<tr>
<td>Team Learning Behaviours</td>
</tr>
<tr>
<td>Dependent Variable: Team Process Improvement</td>
</tr>
<tr>
<td>Team Autonomy</td>
</tr>
<tr>
<td>Team Learning Behaviours</td>
</tr>
</tbody>
</table>

Note: ** $p < .01$ *** $p < .001$
According to hypothesis H2c, we predicted a positive relationship between team learning behaviours and quality of team experience. In order to test this hypothesis, we conducted a two-step hierarchical regression analysis because, as we already mentioned, team size correlates with quality of team experience. The results show a positive and statistically significant relationship between team learning behaviours and quality of team experience ($\beta = .55, p < .001$). Therefore, the hypothesis H2c was supported (cf. Table 6).

<table>
<thead>
<tr>
<th>Constructs</th>
<th>$B$</th>
<th>SEB</th>
<th>$\beta$</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td>.13**</td>
<td></td>
</tr>
<tr>
<td>Team Size</td>
<td>-.04</td>
<td>.01</td>
<td>-.35**</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td>.43***</td>
<td>.30***</td>
</tr>
<tr>
<td>Team Size</td>
<td>-.01</td>
<td>.01</td>
<td>-.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team Autonomy</td>
<td>.07</td>
<td>.12</td>
<td>.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team Learning Behaviours</td>
<td>.61</td>
<td>.14</td>
<td>.55***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ** $p < .01$ *** $p < .001$

According to hypothesis H2d, we predicted a positive and significant relationship between team learning behaviours and team process improvement. The results show a positive and statistically significant relationship between team learning behaviours and team process improvement ($\beta = .48, p < .001$). Thus, similarly to H2a, H2b and H2c, the hypothesis H2d was supported (cf. Table 5).

Hypotheses H3a, H3b, H3c, H3d were also empirically supported considering that:

a) team autonomy had a positively and statistically significant relation to team learning behaviours ($\alpha = .65, p < .001$);

b) team learning behaviours had a positively and statistically significant relation to each one of the dimensions of team effectiveness, after controlling for team autonomy: team performance ($\beta = .38, p = .004$); team viability ($\beta = .43, p = .002$); quality of team experience ($\beta = .55, p < .001$); team process improvement ($\beta = .48, p < .001$).

c) The estimated mediating effect for team performance ($\alpha\beta = .25$), team viability ($\alpha\beta = .28$), quality of team experience ($\alpha\beta = .36$) and team process improvement ($\alpha\beta = .31$) were statistically significant ($P = Z\alpha x Z\beta = 22.03, p < .05$; $P = Z\alpha x Z\beta = 24.96, p < .05$; $P = Z\alpha x Z\beta = 24.39, p < .05$; $P = Z\alpha x Z\beta = 24, p < .05$, respectively).

Considering that based on the 2nd regression equations conducted the direct or non-mediated effect of team autonomy on the team effectiveness dimensions is not statistically significant, regarding all the hypotheses 3 (H3a, H3b, H3c and H3d) team learning
behaviours fully mediate the relationship between team autonomy and team effectiveness (team performance: $\tau = .15, p = .24$; team viability: $\tau = .04, p = .77$; quality of team experience: $\tau = .08, p = .54$; team process improvement: $\tau = -.03, p = .82$). For these values see Tables 5 and 6.

8. Discussion

Through this study, we attempted to contribute in filling a gap in the scientific literature, by investigating the mediating role that team learning behaviours could play in the relationship between team autonomy and team effectiveness.

Hypothesis H1 was supported which implies a positive relationship between team autonomy and team learning behaviours. This result is convergent with the previous research in this field and so provides further support to other findings in the literature: giving autonomy to organizational teams may allow them to act with the flexibility and proactivity they need in order to engage in problem-solving during task performance (Druskat & Kayes, 1999). Moreover, promoting higher levels of team autonomy can also be a good strategy to higher engagement in team learning behaviours (Zellmer-Bruhn & Gibson, 2006).

Regarding the assumptions made about the link between team learning behaviours and each one of the dimensions of team effectiveness, our results supported all four hypotheses (H2a, H2b, H2c, H2d). In other words, the results obtained allow us to affirm that increasing team learning behaviours is also related to an increase in team effectiveness, namely in team performance, team viability, quality of team experience, and team process improvement. Regarding H2a, our results are well-aligned with findings from the literature. Team learning allows for complex problems to be solved and for new knowledge to be formed in turn having a positive relationship with the tasks being performed (Edmondson, Bohmer, & Pisano, 2001; Wheelan & Burchill, 1999). Additionally, team learning encourages adaptive behaviours in the workplace which in turn can lead to positive consequences for team effectiveness (Bunderson & Sutcliffe, 2003). Results for hypothesis H2b are also convergent with the literature (van den Bossche, Gijselaers, Segers, & Kirschner, 2006; van den Bossche, Gijselaers, Segers, Woltjer, & Kirschner, 2011). For instance, aspects related to learning behaviours, such as the collaborative action of discussing with other team members on how to execute a task, can be seen as linked to the team’s desire and capability to work together in the future. The results regarding H2c were also convergent with the literature as van Gelderen, van de Sluis and Jansen (2005)
suggests, for instance, that satisfaction in the workplace, an aspect of quality of team experience, is directly linked to learning behaviours and so team members can feel like they enjoy their work environment by engaging and learning from different organizational activities, such as through analyzing different processes of their work process. Additionally, the literature also points to the impact of team learning behaviours on quality of team experience through teams’ engagement on information exchange and voice which promotes a higher quality of interpersonal relations among team members (Zellmer-Bruhn & Gibson, 2006). Finally, the results regarding hypothesis H2d also converges with the literature. Buckler (1996), for example, showed that the process of learning, namely the way team members work together and support one another is associated with the capacity to improve and innovate. As a summary, a good way to describe the link between team learning behaviours and team effectiveness can be seen through Chan et al., (2003) who address the learning endeavor as a major competitive advantage in the world of organizations.

Addressing hypotheses H3a, H3b, H3c e H3d, we see through the results obtained that all mediating hypotheses were supported. Moreover, our results showed that team learning behaviours fully mediate the relationship between team autonomy and all the team effectiveness criteria analyzed. Therefore, the influence of team autonomy on team effectiveness is produced through team learning behaviours or, in other words, team autonomy no longer has a direct relationship with team effectiveness once team learning behaviours begin to occur along the process. This phenomenon reflects the idea that once team members feel they have control over internal processes and get to decide on how to carry out their tasks, they start engaging in different processes of learning, such as asking questions and seeking feedback which in turn allow them to reach effectiveness as a team.

9. Conclusions, Limitations, and Suggestions for Future Research

The present study has showed that team learning behaviours can play a role by fully mediating the relationship between team autonomy and team effectiveness in organizational settings. At a research level, this study, being focused on real and permanent working teams, can help to shape and strengthen the understanding of researchers on team autonomy, team learning behaviours, and team effectiveness. Moreover, this study contributes to advancing knowledge in the field of team research and of organizational behaviour. At an intervention level, our results point to the positive relationship between

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team autonomy and team learning behaviours and also to the positive relation of these behaviours on team effectiveness. In this sense, our study encourages managers to rethink their strategies on team management, namely in what concerns developing conditions to increase team autonomy. Focusing on team autonomy strategies can promote “learning teams” and so effectiveness may be reached in organization, based on the team level. Thus, our study highlights that managers and leaders should be trained in delegation and in strategies that can increase team autonomy and team learning behaviours in their groups. In this context, managers and leaders should know the characteristics of group development process in order to manage their groups toward high levels of maturity. Training the groups in decision making and promoting teambuilding activities are strategies that the leaders and managers can adopt.

It is important to point out, however, that this research has also some limitations. For instance, considering the nature of our research as cross-sectional, inferences on empiric causality become unviable. Furthermore, opting for convenience sampling and so using a sample only from Portuguese organizations can also imply issues regarding generalizability of results. In fact, it would not be possible to conclude whether the results obtained in this study would have been different with a sample constituted by teams from other cultures. Making use of questionnaires composed only by perceptual measures to collect data, may have led to social desirability bias thus implying a distortion in the accuracy of responses - considering that participants could have felt inclined to answer questions according to what they thought was expected from them. Finally, because the questionnaire was constructed using multiple choice questions, researchers lost the opportunity of gathering more enriching and insightful information in case the survey was formatted to include open-ended questions.

For future research the limitations presented in this study should be considered. For instance, designing a study that would allow for exploring the IMOI model more comprehensively. In this context, designing a longitudinal study would open the possibility of making conclusions based on empirical causality. Incorporating a sample of organizations from a wider cultural background would also increase generalizability of results. Additionally, including forced-choice items and a randomized response technique could alleviate the issue of social desirability bias while making use of open-ended questions would permit the collection of more enriching data (Weiten & McCann, 2010). In order to expand the knowledge that has been acquired through the years in this field, it is also a recommendation to analyze and evaluate the role that other constructs may play

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in the relationship of the studied variables, such as team composition variables including personality factors, values, and abilities (Bell, 2007), gender or educational level of team members. Also, variables such as the complexity of team tasks, demands for creativity, team development, team tenure and sector of the organization could be included in the research design of further studies in this domain. Even though the data were collected from two sources (team members and team leaders) which contributes to a reduction in the effect of common method variance (Conway & Lance, 2010; Podsakoff, MacKenzie, & Podsakoff, 2012; Spector, 2006), the measures in the present study are perceptive and although previous studies have suggested that subjective indicators tend to be positively correlated to objective ones (Ancona & Caldwell, 1992), adding objective indicators, such as production quantity and output quality are suggestions for future research.

10. References


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11. Appendix

Appendix A – Letter of Presentation
Appendix B – Research Project
Appendix C – Team Leader’s Questionnaire
Appendix D – Team Member’s Questionnaire
APPENDIX A
LETTER OF PRESENTATION

Coimbra, 02 de Abril de 2016
Exmo(a). Senhor(a),

Dirigimo-nos a V. Exa. na qualidade de investigadores da Universidade de Coimbra, onde nos encontramos a realizar estudos de mestrado.

No âmbito dos projetos de investigação que estamos a realizar na área de Psicologia das Organizações, do Trabalho e dos Recursos Humanos, sob a orientação da Prof.ª Doutora Isabel Dórdio Dimas, Prof. Doutor Paulo Renato Lourenço e Prof.º Doutora Teresa Dias Rebelo, na Faculdade de Psicologia e de Ciências da Educação da Universidade de Coimbra, propomo-nos estudar alguns processos de funcionamento dos grupos/equipas de trabalho.

Para levar a cabo esta investigação pretendemos aplicar, durante o mês de Abril de 2016, em diversas organizações, um questionário a diversos grupos/equipas de trabalho e aos respetivos líderes (tempo estimado para preenchimento: 20 a 25 minutos).

Às organizações participantes nesta investigação fica garantido o direito ao anonimato e à confidencialidade dos dados, bem como a entrega, após a conclusão dos mestrados, de uma cópia das teses. Caso manifestem o desejo de obter informação sobre os resultados referentes à vossa Organização em particular, disponibilizamo-nos, igualmente, para facultar esse feedback. Consideramos que o benefício poderá ser mútuo, na medida em que, por um lado, a organização de V. Exa. promove a investigação de excelência em Portugal e, por outro, beneficia de informação em retorno, assente no tratamento e análises de dados com rigor metodológico e cientificamente fundamentados.

Gostaríamos de poder contar com a colaboração da vossa Organização para este estudo. Neste sentido, e para uma melhor apreciação da investigação e da colaboração solicitadas, teremos todo o gosto em explicar este projeto, de forma mais detalhada, através do meio de comunicação que considerem mais adequado.

Desde já gratos pela atenção dispensada, aguardamos o vosso contacto.

Com os melhores cumprimentos,
(P’la equipa de investigação)
Contactos

Nicola Paolucci
nicola.paol@gmail.com
(+351) 934 909 550

Pedro Almeida Maia
maiapedro@sapo.pt
(+351) 917 284 084

Josef Bader
josefbader@hotmail.com
(+34) 722 188 737

Rua do Colégio Novo
Apartado 6153 - 3001-802, COIMBRA
Telef/Fax: +351 239 851 454
1) Equipa responsável pelo projeto de investigação

Nicola Paolucci
(aluno do Mestrado Work, Organizational and Personal Psychology da Faculdade de Psicologia e de Ciências da Educação da Universidade de Coimbra)

Pedro Almeida Maia
(aluno do Mestrado Work, Organizational and Personal Psychology da Faculdade de Psicologia e de Ciências da Educação da Universidade de Coimbra)

Josef Bader
(aluno do Mestrado Work, Organizational and Personal Psychology da Faculdade de Psicologia e de Ciências da Educação da Universidade de Coimbra)

Orientação:
- Prof. Doutor Paulo Renato Lourenço
- Prof.ª Doutora Teresa Rebelo
- Prof.ª Doutora Isabel Dórdio Dimas

2) Introdução e Objetivos

A investigação sobre grupos em contexto organizacional é bastante extensa e diversificada. Existem, contudo, algumas áreas que se encontram insuficientemente estudadas, como é o caso das temáticas que são objeto do presente estudo. Desta forma, com este trabalho propom-nos estudar a forma como processos/estados como a liderança transformacional, a autonomia e as relações existentes entre os membros do grupo se relacionam com a eficácia das equipas de trabalho. Visamos, assim, contribuir para um melhor e mais profundo conhecimento relativo ao funcionamento dos grupos, bem como às condições que permitem potenciar a eficácia grupal.

Variáveis em estudo:
- Clima organizacional - conjunto de perceções partilhadas pelos trabalhadores de uma determinada organização;
- Aprendizagem grupal - processo que se caracteriza pela aquisição, partilha e integração do conhecimento por parte dos membros do grupo;

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Josef Bader (e-mail: josefbader@hotmail.com) 2016
• Comprometimento afetivo - relação de vinculação que o trabalhador estabelece com a organização onde trabalha;
• Liderança Transformacional - traduz-se nos seguintes comportamentos: comunicar a visão, desenvolver os colaboradores, fornecer apoio, delegar poder e capacitar os colaboradores, ser inovador, liderar pelo exemplo e ser carismático;
• Comportamentos de suporte - grau em que os membros de cada equipa dão apoio uns aos outros, quando necessário, durante a realização de tarefas;
• Resiliência - num nível grupal, a resiliência traduz-se na capacidade de a equipa enfrentar e superar fracassos, contratempos, conflitos ou qualquer outra ameaça ao bem estar da equipa;
• Autonomia - grau de liberdade de que as equipas dispõem para decidir como conduzir as suas tarefas.
• Eficácia grupal - desempenho, viabilidade, qualidade da experiência grupal e melhoria dos processos.

3) Amostra e participação das organizações

O estudo será realizado nos grupos/equipas de trabalho e os respetivos líderes desta organização. Para que seja considerada uma equipa válida para este estudo é necessário que (1) seja constituída por três ou mais elementos, (2) os membros e o respetivo líder sejam reconhecidos e se reconheçam como equipa, (3) possuam relações de interdependência e (4) interajam regularmente tendo em vista o alcance de, pelo menos, um objetivo comum.

A participação da organização no estudo consiste em possibilitar a recolha dos dados, isto é, da informação necessária à realização do estudo. Deste modo, obriga-se a proporcionar as condições necessárias à execução das atividades referidas.

A recolha de dados decorrerá entre Dezembro de 2015 e Fevereiro de 2016, num período a acordar entre a equipa de investigação e a organização.

4) Formas de recolha da informação e tempo previsto

Na organização, será necessário efetuar:

a) O preenchimento de um questionário pelos membros das equipas de trabalho participantes no estudo (10-20 minutos).

b) O preenchimento de um questionário pelos líderes das equipas de trabalho (5 minutos).

Os questionários poderão ser preenchidos online.

5) Direitos e obrigações da equipa de investigação

A equipa de investigação terá o direito de:

• Não fornecer quaisquer resultados do estudo caso haja interrupção da participação ou recolha incompleta de informação;
• Devolver os resultados do estudo somente na condição de a Organização aceitar que esses dados sejam devolvidos num formato que proteja a identidade dos participantes e que nunca sejam utilizados com a finalidade de avaliar o desempenho dos colaboradores envolvidos;
• Fornecer os resultados somente aquando da conclusão do estudo.

A equipa de investigação obriga-se a:

• Assegurar as condições que permitam e garantam o consentimento informado dos participantes;
• Garantir a confidencialidade e o anonimato de todos os dados recolhidos e cumprir as demais normas éticas que regulamentam a investigação na área da Psicologia;

Team autonomy and team effectiveness in an organizational context: The mediating role of team learning behaviours
Josef Bader (e-mail: josefbader@hotmail.com) 2016
- Recusar a entrega de dados e resultados individuais, quer referentes a trabalhadores da organização participante, quer referentes a outras organizações da amostra;
- Efetuar a recolha de dados de forma a causar o mínimo transtorno possível à organização e aos seus colaboradores.
- Não disponibilizar, em circunstância alguma, a listagem de endereços de e-mail que for fornecida para aplicação do questionário online.

A Coordenação da Equipa de Investigação

---------------------------------------------------------------

Declaração de consentimento informado

Enquanto representante da Organização onde vai ser efetuada a recolha de dados no âmbito do projeto de investigação, declaro que tomei conhecimento e fui devidamente esclarecido/a quanto aos objetivos e aos procedimentos da investigação descritos neste documento. Declaro que aceito todos os direitos e obrigações enunciados e que autorizo de forma livre e informada a sua realização com colaboradores/as da organização que represento. -----------------------------------------------

_______________________________, ___ de ________ de 201

O representante,

--------------------------------------------------------------
APPENDIX C
TEAM LEADER’S QUESTIONNAIRE

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 objectivo 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 correctamente o modo como deverá responder. Certifique-se que respondeu a todas as questões.

Muito obrigado pela colaboração!

[Tempo estimado de preenchimento: 5 minutos]

PARTE 1
(Dados demográficos - para fins exclusivamente estatísticos)

Idade: ________  Sexo: M □  F □
Habilitações literárias: ___________________________________________
Nº de trabalhadores da organização: _________
Tipo de organização: Micro □  Pequena □  Média □ Grande □
Sector de actividade da organização: _____________________________
Há quanto tempo se formou a sua equipa? _________________________
Há quantos anos trabalha nesta organização? _______________________
Há quantos anos trabalha nesta equipa? ___________________________
Função desempenhada: __________________________________________
Nº de elementos da sua equipa: _________
Qual é a principal actividade da sua equipa? [assinale a resposta]
□ Produção          □ Comercial
□ Administrativa     □ Gestão
□ Outra. Qual?__________________________

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Josef Bader (e-mail: josefbader@hotmail.com) 2016
Avalie o **desempenho da sua equipa de trabalho** de 1 (muito baixo) a 5 (muito alto), em função dos seguintes indicadores (assinale com um x):

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Alcance dos objetivos de desempenho.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Produtividade (quantidade de trabalho).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Qualidade do trabalho realizado.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Respeito pelos prazos.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Respeito pelos custos.</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Os membros da equipa adaptam-se às mudanças que ocorrem no seu ambiente de trabalho.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Quando surge um problema, os membros desta equipa conseguem resolvê-lo.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Os novos membros são facilmente integrados nesta equipa.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Os membros desta equipa poderiam trabalhar juntos por um longo período de tempo.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Para finalizar, pedimos-lhe que nos indique em que medida as afirmações seguintes se aplicam à sua equipa de trabalho, assinalando com uma cruz (x) o valor que melhor se adequa a cada afirmação, utilizando a seguinte escala:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

---

Team autonomy and team effectiveness in an organizational context: The mediating role of team learning behaviours
Josef Bader (e-mail: josefbader@hotmail.com) 2016
Os membros desta equipa têm implementado com sucesso novas formas de trabalhar…

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. … para facilitar o cumprimento dos objetivos de desempenho.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. … para serem mais produtivos.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. … para produzirem trabalho de alta qualidade.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4. … para diminuir o tempo de concretização das tarefas.</td>
<td></td>
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</tr>
<tr>
<td>5. … para reduzir custos.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX D
TEAM MEMBER’S QUESTIONNAIRE

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 objectivo 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, não existindo respostas certas ou erradas.

Leia com atenção as instruções que lhe são dadas, certificando-se de que compreendeu correctamente 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!

[Tempo estimado de preenchimento: 20 a 25 minutos]

PARTE 1

*(Dados demográficos - para fins exclusivamente estatísticos)*

Idade: ________  Sexo: M □  F □
Habilitações literárias: __________________________
Há quantos anos trabalha nesta organização? _____________________________
Há quantos anos trabalha nesta equipa? _____________________________
Do total de horas que trabalha por dia, quantas dessas horas, aproximadamente, trabalha em interacção com os seus colegas de equipa? _____________________________
Função desempenhada: _____________________________

PARTE 2

*(Autonomia)*

São, em seguida, apresentadas algumas afirmações relativas ao seu grupo de trabalho. Neste sentido, diga, por favor, em que medida cada uma delas se aplica à equipa onde trabalha. Assinale com uma cruz (x) o valor que melhor se adequa ao que lhe é apresentado em cada afirmação, utilizando a seguinte escala:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

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Josef Bader (e-mail: josefbader@hotmail.com) 2016
<table>
<thead>
<tr>
<th>Quase não se aplica</th>
<th>Aplica-se pouco</th>
<th>Aplica-se moderadamente</th>
<th>Aplica-se muito</th>
<th>Aplica-se quase totalmente</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. A equipa é livre de decidir como realizar o seu trabalho.
2. A equipa é livre para escolher o(s) método(s) a utilizar no desenvolvimento do trabalho.
3. A equipa pode escolher como conduzir o processo de trabalho.
4. A equipa pode decidir quando realizar as diversas tarefas.
5. A equipa tem controlo na calendarização do trabalho de equipa.
6. A equipa tem controlo sobre a sequência das tarefas da equipa.
7. A equipa tem poder para decidir os seus objectivos.

(Aprendizagem Grupal)

O conjunto das seguintes afirmações tem como objetivo caracterizar a sua equipa de trabalho no que diz respeito aos processos de aprendizagem. Neste sentido, diga, por favor, em que medida cada uma delas se aplica à equipa onde trabalha. Assinale com uma cruz (x) o valor que melhor se adequa ao que lhe é apresentado em cada afirmação, utilizando a seguinte escala:

<table>
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<tr>
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<td>3</td>
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<td></td>
</tr>
</tbody>
</table>

1. A informação recolhida pelos membros da equipa é complementada com informação de outros membros da equipa.
2. Chegamos a conclusões coletivas a partir das ideias discutidas na equipa.
3. Os membros da equipa desenvolvem as informações e ideias uns dos outros.
4. Os membros da equipa escutam-se atentamente uns aos outros.
5. Se algo não estiver claro, fazemos perguntas uns aos outros.
6. Se um membro da equipa dá a sua opinião, em seguida ele ou ela pede a opinião dos restantes membros.
7. Depois de errar, a equipa procura em conjunto analisar o que causou esse erro.  
8. Na nossa equipa, achamos que é útil analisar os erros.  
9. Se alguma coisa falhou, a equipa dedica o tempo necessário para pensar seriamente nisso.  
10. Depois de um erro cometido, este é cuidadosamente analisado.  
11. Os membros da equipa expõem os seus erros, para prevenir que outros membros cometam o mesmo erro.  
12. Na nossa equipa discutimos os erros, porque os erros e soluções podem fornecer informações importantes.  
13. Na nossa equipa, discutimos os erros entre nós.  
14. Os erros são discutidos abertamente.
(Qualidade da experiência grupal)

Relativamente às relações na 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:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discordo fortemente</td>
<td>2</td>
<td>Discordo</td>
<td>Não concordo nem discordo</td>
<td>Concorro</td>
<td>Concorro fortemente</td>
</tr>
</tbody>
</table>

1. Na nossa equipa, o clima de trabalho é bom.
2. Na nossa equipa, as relações são harmoniosas.
3. Na nossa equipa, damo-nos bem uns com os outros.