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Antecedent and consequents of reflexivity in teams

Master Thesis

Bruna Moscon Fanara Brito

Universidade de Coimbra

Home tutor:

Isabel Dórdio Dimas

Faculdade de Economia

Universidade de Coimbra

Host tutor:

Ana Zornoza Abad

Facultat de Psicologia

Universitat de València

ABSTRACT

Teams continuously face challenges imposed by an increasing competitive, volatile and demanding market. In order to survive, they must be able to identify and manage obstacles, including their emotions, develop and implement solutions to ensure adequate adaptation. This process is defined as reflexivity. The present study aims to contribute in clarifying the impact of emotional carrying capacity (ECC) on reflexivity; and effectiveness (i.e., performance and satisfaction with the team) as reflexivity's outcome. Also, reflexivity as a mediator between ECC and effectiveness was analyzed. Data were collected from 111 real teams (499 team members and 111 team leaders) in different organizations. Intraclass correlation coefficients and r_{WG} were calculated to justify data aggregation. Simple linear regressions were run on SPSS and, to analyze the last aim (reflexivity as a mediator), the regression analyses were run using PROCESS, an extension of SPSS. Results suggested that: ECC has a significant positive effect on reflexivity; reflexivity has a significant positive effect on satisfaction with the team but a less expressive positive effect on performance. Reflexivity appears to fully mediates de relationship between ECC and performance, and partially mediates ECC and satisfaction with the team. For further studies, it can be an opportunity to investigate other reflexivity's antecedents, to assess different aspects of ECC and to investigate other situations in which reflexivity may positively affect performance.

Keywords: emotional carrying capacity, team reflexivity, effectiveness, satisfaction with the team, team performance.

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INTRODUCTION

Today's constantly changing market demands brings relevance to the concept of team reflexivity, which is the capacity of keeping a team's perception of its environment updated and reflecting about the best decisions to be made (Shippers et al., 2014). Organizational environment is each day more dynamic and ambiguous, its demands changes almost instantly, and teams have to adapt at the same pace to succeed (Church & Burke, 2018). For this reason, team reflexivity can be assumed as a critical capacity in modern organizations (Schippers et al., 2003).

To reach reflexivity, conflict management, motivating/confidence building and affect management are recalled, enabling teams to manage in-group relationships during its interpersonal processes (Marks et al., 2001). It involves having balanced emotions, low frustration levels, a motivated team, cohesion among members and empathy between themselves. Other reflexivity's antecedents to be mentioned are feedback (Konradt et al., 2015), transformational leadership, procedural rationality (Hammedi et al., 2011) and Emotional Carrying Capacity (Dutton & Heaphy, 2003).

Useful to understand the context where reflexivity is built, the social information processing perspective introduces the idea that a social environment provides inputs for how people should behave, form their opinions and, therefore, express their emotions (Salancik & Pfeffer, 1978). Social connections and communicating with each other open a path where events gain meaning and common perceptions are built and experienced (Salancik & Pfeffer, 1978), leading to a similar affective state within a team (Shin, 2014).

Hoegl and Parboteeah (2006) propose that teams with social skills demonstrate to be more united, communication between team members is more open, they are more empathic with each other, increasing team's reflexivity. At this point, the concept of emotional carrying capacity (ECC) adds value to this investigation as reflexivity's

antecedent of our interest. ECC can be identified when a party feels open/safe enough to express emotions, not fearing being judged or misunderstood: mutual empathy is crucial (Dutton & Heaphy, 2003).

In this sense, ECC is expected to be positively related to team reflexivity, which is important to the adapting process when changes and difficulties must be faced (Stephens et al., 2013). Stephens et al. (2013) also posit that individuals can gain knowledge and can be able to adapt when their emotions are expressed in a profitable way.

Following to reflexivity's consequents, Konradt et al. (2015) suggest that while a team reflect together, its members are exchanging opinions, experiences and analyzing problems. This point highlights the importance of team reflexivity to its effectiveness: Since all members are submerged by the same reasoning and ways of functioning, it is likely to facilitate strategy to become action and, consequently, improve teams' effectiveness (Zornoza et al., 2017). Team effectiveness can be assessed through three criteria (Hackman, 1983): first, regarding the output given by the team (if it is satisfactory in comparison to what it is expected); second, involving the way the team choses to work in terms of social processes; and third, if working in that team satisfy its members'.

In other words, team effectiveness can be categorized in terms of behaviors headed to goals achievement, for example learning new behaviors, team process improvement (Mathieu et al., 2008), performance itself and satisfaction with the team (Dimas et al., 2018; Zornoza et al., 2017).

By team performance, it is assumed as the extent in which a team present intended and awaited results in order to achieve goals previously set (Chatman & Flynn, 2001). Team members behave towards both better team's learning process and performance, leaving hinted that satisfactory performance outcomes rely on team members synergy

(Qiu & Scherwin, 2014). Satisfaction with the team is defined as an affective response, it is a result of team members evaluation of the different team's aspects (Witteman, 1991). As indicators of effectiveness, performance and satisfaction with the team are expected to be predicted by reflexivity.

Rhee (2006) suggests that expressing both negative and positive emotions (here considered as ECC) can generate a "psychologically safe environment for learning" (p.6), providing a seek for feedback and to explore alternatives (here closest in definition to reflexivity), impacting the teams' effectiveness positively. Therefore, the present study last aim to is to investigate the mediating role of reflexivity between ECC and performance and satisfaction with the team.

It is in a volatile and uncertain context that this study makes itself relevant: it is a step to clarify a reflexivity's antecedent and consequents, contributing for teams to work better on their cyclical actualizing process. This group-level study is an attempt to reinforce the importance and the benefits of sharing emotions among team members to achieve the so-desired effectiveness, through reflexivity. Also, to support reflexivity as a relevant tool (for team members and managers) to face nowadays' uncertainties and adapt accordingly. In addition, this study might be a contribution towards the idea that it is possible to achieve effectiveness by sharing emotions and having team members actively participating in the decision-making process.

This study aims to investigate: ECC as reflexivity's antecedent (H1); performance (H2a) and satisfaction with the team (H2b) as reflexivity's consequents; and reflexivity as a mediator between team performance (H3a) and satisfaction with the team (H3b). Therefore, and to facilitate in understanding, the aims of this study can be represented as follows:

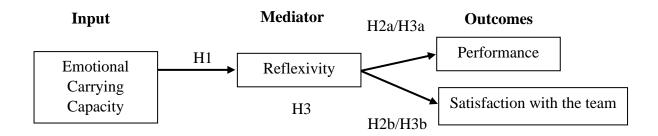


Figure 1. Hypothesized relationships in this study

LITERATURE REVIEW

This section is initiated by a discussion on the concept of team reflexivity, followed by a subsection regarding the relationship between ECC and team reflexivity, to support H1. The upcoming discussion to be found is on team reflexivity and effectiveness, introducing H2a and H2b. To close this section, the role of team reflexivity as a mediator between performance and satisfaction with the team is debated (H3a and H3b).

Team reflexivity

Since reflexivity is a relatively new concept, some discussion on its definition is still deserved. Reflexivity has been conceptualized as the capacity that group members have to reflect about the group's goals and ways of functioning and adapt them according to the changing circumstances (West, 1996). Reflection and adaption are two dimensions of this concept (West, 1996). Reflective thought involves a conscious process of thinking carefully about a belief that leads to new ones, which have logical consequences; this process gives background to ideas, behavior and decisions (Dewey, 1910). Adaption can be assumed as a consequence of decisions made during reflection, which do not guarantee that each action will be the correct one (West, 1996).

As the chosen definition that will guide this investigation, Shippers et al. (2014) make a delimitation of team reflexivity as the act of reconsidering the decision-making process and checking if the team is headed to its targets. In contrast to West (1996) that includes adaption into the concept of reflexivity, Shippers et al.(2014) consider that team reflexivity is prior to adaptation to a new situation and is part of a team's learning process inserted in a dynamic context.

Konradt et al. (2016) integrates reflexivity in the team process taxonomy delimited by Marks et al. (2001). One of its categories is the transition phase process, that is identified when a team is focused on its goal and is working on considering actions and formulating strategies. In this point, reflection is closer to the transition process. Followed by reflection, the integration mentioned considers adaption as an action process (Konradt et al., 2016). This last concept involves team's accomplishment to achieve its goals.

Since the environment is in constant changing, a team's need to update its scenario comprehension, which requires reflexivity to choose the right path (Hoegl & Parboteeah, 2006). For Soros (2013), reflexivity is applied to reasoning participants, who comprehend the world and are able to act according to their interests. For this reason, reflexivity makes itself convenient as a strategy to manage environments' complexity and upcoming challenging activities (Tjosvold et al., 2004).

West (1996) suggests that reflexivity can be identified on a group's objectives, strategies, processes and environment: reflexive groups have a more holistic comprehension of their work, increasing its decisions repertory, forecasting situations and acting proactively. Also, searching for feedback is indicative of reflexivity, revealing that the group is susceptible to different inputs regarding its performance and context interpretation (West, 1996; Zornoza et al., 2017). Sung et al. (2019) suggest that team reflexivity is positively related to feedback-seeking behavior.

Reflecting united, supply team members the opportunity to share information, and therefore, recalibrate assumptions (Konradt et al., 2016). Team reflexivity decreases a team's tendency to fail in processing information, which impacts in its errors and performance (Shippers et al., 2014). According to the same authors, there are three possible paths to emerge team reflexivity in cases of failure in sharing information in a team. One of them is by having rules and operating means that foment critical reasoning. Second, dealing with goals, different phases and strategies clearly offers opportunities for new conclusions to emerge. Third, such conclusions need to be updated overtime by a decision-making process that engages the team.

Still, another implied antecedent of reflexivity is feedback: it brings the evidence of a need for changing the team's actions, providing a propitious scenario for the team to reflect on its approach to issues (Konradt et al., 2015). As previously mentioned, the reflexivity antecedent that will be explored in the present study is ECC.

Emotional carrying capacity and team reflexivity

In order to investigate the relationship level between team members, the concept of emotional carrying capacity (ECC) was adopted. ECC is observed when parties involved can express their emotions (positive and negative ones) in a productive way (Dutton & Heaphy, 2003).

It is by establishing and maintaining a high-quality connection with others that one can acquire information about him/herself, others and the context, in other words, learning processes are implicated with how people communicate with others (Dutton & Heaphy, 2003). According to Stephens and Carmeli (2016), knowing about one's teammates feelings strengthen the ability to deal with uncertainties, one of the features of the type of environment where reflexivity is recalled. They suggest that exchanging ideas

and its importance walk along with the expression of emotions, providing relevant information in team discussions, taking further the reflexive process.

In this sense, this process of how team members communicate with each other is particularly important for reflexivity to happen, since it involves information sharing so that future plans can be adapted (Konradt et al., 2016).

Following, Tjosvold et al. (2004) includes this type of behavior as a cooperative one that can lead teams to success: members put themselves on a positive vulnerable situation where they embody divergent ideas, by the time they constructively share different opinions and reflect about them. Before new and coherent solutions are postulated, this process requires a full comprehension of the issue in discussion, not neglecting its complexity nor the information available (Tjosvold et al., 2004).

Qiu and Scherwin (2014) propose that team members with more dispositional positive affect were more interested in interacting with others, besides the fact that they were more available to exert tasks beyond their responsibilities and were more involved in team learning. Thus, dispositional affect seemed to indirectly impact positively interpersonal behaviour and team learning – here it is closer in meaning to sharing positive emotions and reflexivity.

Expressing positive emotions not only can help an individual to adapt (Folkman & Moskowitz, 2000), but also promotes team learning (Watzek et al., 2019), facilitating the whole process of reflexivity. Fredrickson (1998) proposes the broaden-and-build model in which positive emotions can increase one's behavioral and reasoning range options by exploring, playing and integrating experiences that will build one's both personal and social resources. The possibility of team members to bring their emotions added to the fact that there is a learning transposition over the different life situations (Kolb, 1984) set an environment where the team members can learn from each other,

reflect together and consequently, adapt (Shippers et al., 2014). In other words, their previous learning of other contexts can be brought to this reflexive space where the adaptation plan is being build, by the time a new learning opportunity takes place while sharing positive emotions.

In groups, sharing positive emotions can makes teams' solutions, ways of thinking and acting broader, tending to promote a greater team performance in difficult situations (Meneghel et al., 2016). Teams that experience positive emotions are likely to be more flexible and adaptable when facing adversities, serving as background for effective results (Meneghel et al., 2016). In this sense, dealing with obstacles supply teams more opportunities to build intragroup relationships, to grow and learn together (Stephens et al., 2013).

On the other side, reflexivity can decrease if team members have conflicting opinions – from where negative emotions can emerge – impacting performance negatively (Schippers et al., 2003). Different from what it is commonly agreed, socially sharing negative emotions can provide profitable outputs at a group level (Yang & Kelly, 2016): as the opportunity of sharing negative emotions is given, team members can identify similarities, create empathy and consequently being socially integrated, alleviating negative emotions. There can be found a positive feature of sharing emotions to create social bonds within a team (Fisher & Manstead, 2008).

The expression of negative emotions highlights the need to address important issues (Quigley and Feldman Barrett, 1999), which brings value to the process of reflexivity, since it touches how the team is going to face a challenging context. Once again, to go through the exercise of reflecting together, it is assumed that the team will need to be socially bonded by the share of emotions.

However, it is worth mentioning that the share of negative does not imply that it is done irresponsibly. It must be done in a constructive way: respecting the others and being concerned about the way those emotions are going to be interpreted (Stephens & Carmeli, 2016). By considering that ECC can improve team members relationships, making them closer to each other, and having empathy with each other's emotions, this study aims to investigate ECC as an antecedent of team reflexivity. It has been taken into account that reflexivity involves learning process and so can be considered as a social-cognitive process (Shin, 2014) that requires the share of emotions.

H1: ECC will have a positive effect on team reflexivity.

Team reflexivity and effectiveness

West (1996) posits that cycles of reflection and adaption (reflexivity) will influence group's effectiveness. Teams effectiveness relies on shared and combined information given by its members and on its flexibility to constantly adapt (Schippers et al., 2014). According to Zornoza et al. (2017), the process of improving a team's effectiveness requires search and give feedback, face problems, learn from errors, reflect about relevant processes and act innovatively; it helps to solidify team learning (Schippers et al., 2013). These episodes are cyclical, revealing reflexivity as an effectiveness' antecedent (Zornoza et al., 2017).

In this sense, Konradt et al. (2016) assume that reflexive teams achieve better decisions because they tend to analyze distinct alternatives. This idea relies on the fact that only reflection will not guide teams through strategies that can be effective or not, but the adaption process would (Konradt et al., 2016; Zornoza et al., 2017). Thus, reflection should be a guided process to result in better effectiveness (Zornoza et al., 2017).

In order to better investigate the relationship between reflexivity and effectiveness, the second hypothesis will be divided in two. As mentioned above, satisfaction with the team and team performance are considered as indicative of effectiveness, when considered as a consequent of reflexivity (Mathieu et al., 2008; Schippers et al., 2003; Zornoza et al., 2017).

Mathieu and Rapp (2009) suggested that teams with high-quality strategies performed better than teams with poorer strategies. At this point, a high-quality strategy can be linked to team's capacity to reflect and set a relevant and accurate action plan.

Having a good communicating process, a high degree of shared information and its blending within the team affected positively team performance (Qiu & Scherwin, 2014). If compared to low dispositional positive affect team members, the ones with high dispositional affect seemed to behave in a manner that made their tasks easier to execute (Qiu & Scherwin, 2014). Team communication is closest in definition to reflexivity in this study (Valls et al., 2016), mediating education level diversity and team performance.

In addition, knowledgeable team members allied with formal, well-structured planning and interpersonal processes are related to positive impacts on team performance (Mathieu & Schulze, 2006). In the same investigation, it was not possible to establish a significant relationship between interpersonal processes and performance. When team performance is initially low, reflexivity is positively related to team learning and team improvement on performance (Schippers et al., 2013). In contexts which flexibility is reduced, reflexivity was suggested to provide a propitious terrain for improvements in team's performance (Farnese et al., 2016). Shippers, West and Dawson (2015) found that reflexivity is relevant when workload is increased, positively influencing performance, working better and innovatively.

H2a: Team reflexivity will have a positive effect on team performance.

Although the literature is scarce on reflexivity predicting satisfaction with the team specifically, a few connexions can be explored. Schippers et al. (2003) conducted a study where reflexivity was significantly associated with satisfaction, as an effectiveness outcome. On the other hand, allied with team feedback, reflexivity did not present an effect on satisfaction on virtual teams (Peñarroja et al., 2016).

In terms of affective consequences, reflexivity is related to affective management in the extent that it can balance emotions and resentments while a team faces difficulties, promoting empathy and more connection between team members (Marks et al., 2001). This can lead to an increase on satisfaction with the team. Following this reasoning, reflexivity can enhance team cohesion, better communication, and increase trust levels between team members, impacting positively on satisfaction with the team (Ku et al., 2013).

It is assumed that the process of reflexivity enables the emergency of conflicts among teams, since it is a moment where different ideas, emotions, opinions and decisions are being shared and discussed. In sequence, these conflicts can impact satisfaction with the team in different ways (De Wit et al., 2012).

Li et al. (2009) found that satisfaction with the team can vary according to interpersonal relationships, tasks features, performance and members participation. In this sense, reflexivity can be related to members participation on the working flow, concerning the way they can contribute to collective reflection and to support team's deliberation about the following actions.

H2b: Team reflexivity will have a positive effect on satisfaction with the team.

Team reflexivity as a mediator between performance and satisfaction with the team

Previous studies revealed that team reflexivity has a mediator role between emotions and team performance (Shin, 2014; Shin et al., 2016).

Shin et al. (2016) findings propose that reflexivity mediates the relationship between team learning orientation and team innovation. According to them, teams' reflexivity flows and subjects are enriched by the focus on future growth and favorable external recognition.

Team reflexivity was found to mediate the relationship between authentic leadership and team performance (Lyubovnikova et al., 2017), integrating external team factors to its predictors, as the style of leadership (Wang & Lei, 2018). Also, a directive leadership can provide a healthy environment for heterogeneous teams to deal with its differences, so that they can reflect in a proper way and perform better (Somech, 2006).

Contrarily, the role of team reflexivity as mediator may have been overestimated by the research community: when analyzed with other mediating processes, team reflexivity did not show significant relevance (De Jong & Elfring, 2010).

Sung et al. (2019) imply that when team members can elaborate and understand their emotions, they become more able to seek for feedback, and team reflexivity provides a profitable scenario for this behavior to appear. Positive group affective tone's relationship with creativity (as an indicator of performance) is mediated by reflexivity (Shin, 2014). This evidence suggests that emotions and the capacity to appropriately express them (Stephens et al., 2013) might affect team results due to their influence on how team members reflect, debate, discuss and adjust their objectives, strategies and working methods. Team members that are able to manage their emotions and understand each other make a safer environment easier to emerge - characterized by the share of ideas, healthy discussions to address issues – and, therefore is related to the team's effectiveness (Watzek et al., 2019).

As explained earlier, it is expected that ECC is an antecedent of team reflexivity, and that team reflexivity predicts effectiveness. Therefore, it is reasonable to anticipate, and based on previous research, team reflexivity as a mediator: when team members are able to express constructively their emotions, they will be more likely to reflect about the challenging circumstances and make conscious decisions; attaining better performance and increasing satisfaction with the team. The last hypothesis to be tested can be summarized in the following sentence:

H3a: Team reflexivity mediates the relationship between ECC and performance.

H3b: Team reflexivity mediates the relationship between ECC and satisfaction with the team.

METHOD

Sample

In order to be eligible to integrate the sample, teams had to have at least 3 members, which recognize themselves as a team and work with interdependence to achieve a common goal (Lourenço et al., 2014). Team leaders had to be formally designated as such.

To consider teams data valid, this criterion was established: minimum half of the team members should have responded to the given questionnaires. Also, questionnaires with up to 10% of missing values were not considered. Taking these principles into account, 24 teams did not present valid data to be analyzed. Following Bryman and Cramer (2005), if participants not given answers corresponded to 10% or more, they would not be considered.

The sample collected for this study comprises a total of 712 participants (576 members and 136 leaders) from 136 teams. Therefore, the remaining valid data consists of 111 teams/leaders and 499 members from 72 companies.

About the participant companies' operating markets, 63.6% operate in trading and services, 20% were from the associative sector and 16.4% operate in manufacturing. Regarding the companies' size, 32.1% have up to 10 employees (most represented), 19.3% have between 11 and 49 employees (less represented); 22% have between 50 and 249 employees and the ones with 250 or more employees represents 26.6% of the sample.

Teams have on average 6 members (M = 6.10; SD = 3.84), varying from 3 to 22 members. Team's average seniority is 8.47 years (SD = 9.13), diverging from 3 months to 46 years approximately.

In relation to team members, they have an average age of 35.98 years old (SD = 11.42; participants were between 18 and 67 years old) and 61.7% were women. Members average seniority in their organizations is 9,68 years (SD = 9.96; fluctuating from 1 month to 50 years). On the other hand, members average seniority in their teams is 5.55 years (SD = 6.63; ranging from 1 month to 43 years). Concerning members education, 41.4% achieved a bachelor's degree and 55% completed trainings in teamwork.

Concerning the leaders, they have on average 42.93 years old (SD = 11.27; leaders were between 18 and 67 years old) and 54.6% were male. Leaders average seniority in their organizations is 14.82 years (SD = 10.93; varying from 3 months to 45 years). Their average seniority ahead of their teams is almost 6 years (SD = 6.84; ranging from 1 month to 27 years). Among leaders, the ones who completed a bachelor's degree represents 58.7%.

Procedure

The sample was collected from December 2017¹ until January 2019 and organizations were reached by convenience through an inquiry questionnaire method. According to Mitchell and Jolley (2010), the mentioned method allows a higher quantity of data collection, optimizing time and displacements.

The responsible of each potential participant organization received the first contact either in person or by e-mail, in order to present the investigation project. The companies that manifested their interest in collaborating and that fulfilled the criteria previously set had a detailed explanation about the investigation project (aims, participating process, data collection procedures and participants rights and duties).

All participants had their anonymity and information confidentiality guaranteed by the term of consent. It is very important to mention that it was left clear to participants that data would only be analyzed at team-level, avoiding any future constraint. Leaders took approximately 7 minutes to respond their questionnaires (in paper or online), while team members, 20 minutes. The questionnaires were preferably fulfilled in person, in case participants had questions to make. In other cases, team leaders were asked to deliver and gather the completed questionnaires in sealed envelopes by their respective subordinates. Online questionnaires were elaborated with: www.limesurvey.org and they were sent to participants via e-mail (246 participants responded in this format).

Measures

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¹ Data collection is prior to this study because this master thesis makes part of the VITEM Project. It is a research cooperation that engages several universities in Portugal and in Spain that aims to understand the functioning of teams with a degree of virtuality regarding the incidence of subgroups, emotional competencies; its impact on performance, innovation and reflexivity.

Leaders and team members answered different questionnaires. Performance was assessed by leaders. Team members provided information about ECC, team reflexivity and satisfaction with the team.

Emotional Carrying Capacity: This variable was investigated with a 3-item scale developed by Stephens et al. (2013). The scale is a *Likert* one and it ranges in 7 points from "strongly disagree" to "strongly agree". An item example is "I can fully express my emotions to my Interaction Partner". Cronbach's alpha for this scale was .80.

Teams' reflexivity: In the interest of examining teams' reflexivity, a *Likert* 9-item scale was chosen: an adaption proposed by Tjosvold et al. (2004) of the scale "Team reflexivity" (Carter & West, 1998). It was translated to Portuguese by Campelo (2018) and its Cronbach's alpha reached .90. The instrument focuses on team's methods to achieves its goals and how it works. Punctuation fluctuates between "1 – Strongly disagree" to "5 – Strongly agree". A sample item is "The methods used by the team to get the job done are often discussed.". In this study, Cronbach's *alpha* value was .91.

Satisfaction with the team: This variable was assessed using the Work Group Satisfaction Scale (ESAGT, in Portuguese) elaborated by Dimas et al. (2018). In six items, the scale measures the level of satisfaction (or dissatisfaction) of team members regarding different dimensions of the respondent's current team, for example the relationship between team members, team's climate, how does the leader organize and coordinate team's activities. ESAGT is a 7-point scale that ranges from "1 – Totally dissatisfied" to "7 – Totally satisfied". An item example could be "The relationship between leader and team members". Results from prior studies reveal that the scale presents good levels of reliability with Cronbach's *alpha* above .90 in most of the studies that were developed (Dimas et al., 2018). In this study, Cronbach's *alpha* value was .92.

Performance: The Team Performance Evaluation Scale – Form II (EADG-II, in Portuguese) was chosen to examine teams' performance according to its leader perspective. Developed by Dimas (2007), the referred scale has 10 items with 10 points from "1 - Bad" to "10 - Excellent" and an item example would be "Quality of work produced". The aim of EADG-II is to evaluate performance of teams that do not execute routine activities. Lourenço et al. (2014), showed a value of .93 as Cronbach's alpha for this scale, corroborating with our findings.

Design and Statistical Analysis

As informed previously, the chosen measure instruments for each variable had already been validated by other studies, showing satisfactory Cronbach's alpha values, validity and other psychometric properties.

All data treatment was run on SPSS 26. An exploratory factor analysis (EFA) was conducted to test the factorial structure of the ECC instrument. Since the present study's approach is at a team level, it was necessary to calculate intraclass correlation coefficients (ICC 1 and 2) to prove team members responses homogeneity and justify data aggregation for ECC, team reflexivity and satisfaction with the team (Klein & Kozlowski, 2000). It was run under the two-way random effects model so that the results could be generalized (Koo & Li, 2016). Each reported ICC had mean estimations with 95% confidence intervals. According to Koo and Li (2016), ICC values can be interpreted as having poor reliability (<.50), moderate (values between .50 and .75), good (values between .75 and .90) and excellent (values above .90). To verify agreement among team members, r_{WG} was calculated. Performance's data was not included in this step whereas it was assessed only by the leaders.

For all hypothesis, correlation between variables were verified: ECC, team reflexivity, satisfaction with the team and performance. In addition, hypothesis 1, 2a and 2b were tested in by analyzing the the correlations table.

Regarding hypothesis 3a and 3b, two linear regression analysis was performed on PROCESS. One to examine performance as an outcome and the second, work group satisfaction, both of them under the model 4. PROCESS is an extension developed by Hayes (2013) for SPSS and SAS, that allows a path analysis of logistic regression and estimate unknown parameters in a linear regression, by ordinary least squares. This modeling tool can build a 95% confidence interval for indirect effects using the bootstrapping method. A set criterion for a statistically significant indirect effect is when confidence interval bootstrapping upper and lower values excludes zero. According to Hayes (2013), the mentioned method is more appropriate because it allows observe a significant product of coefficients despite coefficients significance between the independent variable and the mediator, and the dependent variable and the mediator.

Since participant teams are heterogeneous in their characteristics, team size and tenure in the team were controlled in the main analysis. A correlation matrix was examined to verify potential influence of the referred control variables.

RESULTS

For the ECC instrument, all the correlations between items were > .30, justifying the possibility to do an EFA. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .69, which is eligible to be considered (Hair et al. 2005) and the Barlett's test of sphericity was statistically significant (p < .01). The results obtained showed a one-factor solution that accounted for 72% of common variance. All items' factor loadings were higher than .65, making the factor solution interpretable.

Still on ECC data, ICC(1) and ICC(2) found values were .58 and .80 (F = 5,12, p < .01) respectively. This means that 80% of the variance in the mean is attached to reality, a satisfactory reliability. Team's reflexivity ICC(1) value was .54 and ICC(2) was .91 (F = 11,58, p < .01, for both values), also showing satisfactory values. On satisfaction with the team data aggregation, ICC(1) = .62 and ICC(2) = .92 (p < .01). The r_{WG} for ECC was .79; for team reflexivity, .92 and for work group satisfaction, .92. Therefore, data aggregation in these three variables is justified.

Descriptive statistics can be found in Table 1 (means, standard deviations and correlations of the aggregated data).

Table 1
Means, Standard Deviations and Correlations

Variable	M	SD	1	2	3	4	5	6
1. Team size	6.10	3.84	-					
2. Team longevity	8.47	9.12	.22**	-				
3. ECC	3.61	.54	21*	31**	-			
4. Team reflexivity	3.75	.54	043	16	.66**	-		
5. Satisfaction with	5.57	.63	11	17	.64**	.68**	-	
the team								
6. Performance	7.71	.96	11	18	$.24^{*}$.34**	.37**	-

N=111

Results of the correlation analysis between control variables and the variables explored in this study indicated a negative significant association between: team size and ECC (r(111) = -.209, p < .05), tenure in the team and ECC (r(111) = -.362, p < .001). Team longevity was found to have a negative correlation with team reflexivity (r(111) = -.16, p < .001). As it can be observed in the following table, control variables did not show expressive correlations with variables of interest in this study, for this reason they will not be further explored (Becker, 2005).

^{**} p < .01.

^{*} *p* < .05.

Regarding hypothesis H1 (ECC will have a positive effect on team reflexivity): results of the correlation analysis indicated that there was a positive significant association between ECC and reflexivity (r(111) = .661, p < .001).

Regarding hypothesis H2a (Team reflexivity will have a positive effect on team performance), the correlation analysis indicated that there was a lower but significant association between reflexivity and performance (r(111) = .339, p < .001).

Furthermore, to exam hypothesis H2b (Team reflexivity will have a positive effect on work group satisfaction), the correlation table was also reviewed: significant positive association between reflexivity and satisfaction with the team (r(111) = .685, p < .001) was found.

Finally, to test H3a and H3b (Team reflexivity mediates the relationship between ECC and performance and satisfaction, respectively), mediated regression analysis were performed on PROCESS, under the model 4. The first run had Y variable as performance and the second, satisfaction with the team. In concern to performance as an outcome (see Figure 2), there is no statistically significant direct effect of ECC on performance (c' = .04, p > 0.5).

It was found an indirect effect, confirming a fully mediation of team reflexivity between ECC and performance (a*b=.37, IC 95% = [.06, .65]). Regarding the analysis of work group satisfaction, see Figure 3. The direct effect of ECC on satisfaction with the team (c'=.38, p<.01) is slightly higher than the indirect effect (c=.36, p<.01). It confirms that team reflexivity plays a role on this relationship, partially mediating it (a*b=0.35, IC 95% = [.20, .55]). Since the direct effect of ECC on satisfaction with the team was shown to be significant and since ECC also appears to have an indirect effect on this variable, the mediation identified was a partial one (Hayes, 2013).

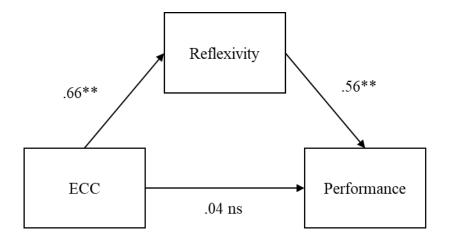


Figure 2. Team's reflexivity mediation between ECC and Performance results

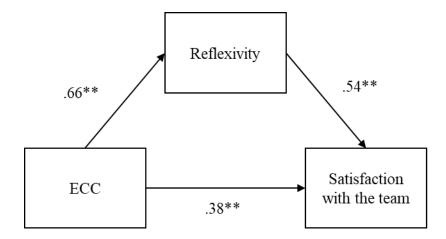


Figure 3. Teams reflexivity mediation between ECC and satisfaction with the team results

DISCUSSION

The aims of the present investigation are to study the following hypothesis: ECC will have a positive effect on team reflexivity (H1); Team reflexivity will have a positive effect on team performance (H2a); Team reflexivity will have a positive effect on satisfaction with the team (H2b); Team reflexivity mediates the relationship between ECC and performance (H3a); and team reflexivity mediates the relationship between ECC and satisfaction with the team (H3b).

Results suggested that ECC has a significant positive effect on team reflexivity (when ECC increases, reflexivity will increase as well), confirming hypothesis 1. Moreover, team reflexivity has a significant positive effect on satisfaction with the team, and different than expected, a significant but less expressive positive effect on performance. This confirms hypothesis 2a and 2b. Regarding hypothesis 3, team reflexivity appears to fully mediates de relationship between ECC and performance (H3a), and partially mediates ECC and satisfaction with the team (H2b).

Concerning H1, our results suggest that ECC has a positive relationship with team reflexivity. It is in line with Qiu and Scherwin (2014), that posit that teams' members with more dispositional positive affect were more interested in interacting with others, they were doing activities beyond their responsibilities and were more involved in team learning. It is by establishing and maintaining a high-quality connection with others that one can acquire information about him/herself, others and the context: in other words, learning processes are implicated with how people communicate with others (Dutton & Heaphy, 2003; Konradt et al., 2016). Having this environment will enable teams to reflect (Shippers et al., 2014; Tjosvold et al., 2004):

By sharing emotions, team members will be more likely to transpose learnings from other situations for the reflexive exercise (Kolb, 1984). Expressing positive emotions can help teams to adapt (Folkman & Moskowitz, 2000; Fredrickson, 1998; Meneghel et al., 2016; Stephens et al., 2013; Watzek et al., 2019). It implies that if team members feel comfortable and safe to share their emotions with colleagues, they will be more inclined to easily reflect together, evaluating and changing the team's strategy.

In contrast with Schippers et al. (2003), the present result corroborate with the idea that where sharing negative emotions support a better interconnection between team members, another important element to achieve team reflexivity (Fisher & Manstead,

2008; Quigley & Feldman Barrett, 1999; Stephens & Carmeli, 2016; Yang & Kelly, 2016).

Research and theory about the determinants and consequences of team reflexivity is still insufficient and scarce (Schippers et al., 2003). Schippers et al. (2013) suggests that reflexivity's beneficial outcomes tend to not to be clear, which makes an opportunity for further studies: their findings imply that if a team can foresee benefits from being reflective, than reflexivity can impact performance positively. The fact that hypothesis 2a was not supported, as Somech (2006), endorses this statement. Also, it was not possible to corroborate with Mathieu et al. (2008), Mathieu and Rapp (2009), Qiu and Scherwin (2014), Schippers et al. (2003), Schippers et al. (2013), Valls et al. (2016) and Zornoza et al. (2017). In the mentioned studies, team reflexivity was found to be related to a better performance

Even though our analysis were statistically significant, a lower correlation between team reflexivity and performance was found. It is in line with Mathieu and Schulze (2006) findings that interpersonal processes are related to positive impacts on team performance if associated with other aspects, as, for example, knowledgeable team members and a well-structured planning. Also, the finding that team reflexivity is relevant to performance when workload is increased (Shippers et al., 2015) sets a specific condition that may help to explain that H2a was not confirmed. Following the same line of thought, it is seemingly under specific reflexive practices that a team will be more likely to achieve a better performance (Shippers et al., 2014; Farnese et al., 2016).

Even though team reflexivity has been considered as one practice that would necessarily lead to positive results, Konradt et al. (2016) make a contrast affirming that a team can discuss irrelevant issues or either approach situations superficially, leading to unfit decisions. On the other hand, teams able to reflect deeply can also face difficulties

in the adapting process, even though the motives for this remain unclear (Konradt et al., 2015). More research in team reflexivity is needed to appreciate its influence on team performance (Farnese et al., 2016; Matsuo, 2018, Schippers, et al., 2013).

Having satisfaction with the team as a dimension of effectiveness, the present result for H2b can partially support the idea that team reflexivity has a positive relationship with team's effectiveness (West, 1996). With respect to H2b, a confirmation of this hypothesis is implied, corroborating with the studies done by Ku et al. (2013), Schippers et al. (2003) and Marks et al. (2001) and diverging from Peñarroja et al. (2016). As assumed, the process of team reflexivity enables the emergency of conflicts among teams, since it is a moment where different ideas, emotions, opinions and decisions are being shared and discussed; that can impact satisfaction with the team (De Wit et al., 2012). It also validates the idea that satisfaction can vary according to interpersonal relationships, tasks features, performance and members participation (Li, et al., 2009). Following the previous theoretical relationship established, the cohesion, the improvement in communication and the developed trust among team members provided by reflexivity affects positively satisfaction with the team (Ku et al., 2013), sustaining an explanation for the confirmation of H2b.

Regarding H3a and H3b, the current findings differ from De Jong and Elfring (2010), that did not confirm their hypothesis regarding team reflexivity as a mediator. Results implies a fully mediation between ECC and performance (H3a). It means that, when ECC is high and team reflexivity is present, performance will be likely to increase. In other words, when team members can express their emotions in a constructive way, they can reflect collectively about the changing circumstances, creating cohesion and empathy to decide which decision will be taken, and then, delivering better results. This mediation confirmation corroborates with the role of team reflexivity as a mediator in

previous studies (Rhee, 2006; Shin, 2014; Shin et al., 2016; Somech, 2006; Stephens et al., 2013; Watzek et al., 2019).

The present finding endorses the idea that dealing with emotions, make teams become more positively vulnerable to feedback, and, therefore, perform better (Sung et al., 2019).

The partial mediation result between reflexivity and satisfaction with the team (H3b) can be understood by the fact that this variable can vary according to interpersonal relationships, tasks features, performance and members participation (Li et al., 2009). In addition, it is an opportunity to further investigations to try to comprehend which other factors allied with ECC mediated by reflexivity can result in an increase on satisfaction with the team; or which other mediators allied with reflexivity affects this relationship.

Limitations and strengths

This study presents a set of limitations. First, almost 64% of the participant organizations operates on trading and services. Despite the fact that it was a convenience sample, perhaps it would facilitate generalization if this predominant business would be more representative on the sample, or if business operations among the sample were more diversified. Second, data were collected once. It could be fruitful to assess teams overtime and compare results. At the same time, it would be difficult to reach the same team members and leaders due to turnover and promotions flows.

Third, the instrument chosen to measure ECC is a three-item questionnaire. A halo effect can be produced in assessing the variable (Valls et al., 2016). A larger scale would be appropriate to explore ECC more holistically.

Fourth, other reflexivity's antecedents should be investigated, for example personality, professional background and attitudes (Hoegl & Parboteeah, 2006; Konradt et al., 2016; Matsuo, 2018), different team sizes (Schippers et al., 2015), level of education (Valls et al., 2016), team seniority and team diversity.

Furthermore, a few strengths can be identified in this investigation. The sample had a balanced proportion of experienced male and female leaders and performance information were given by a third party. In this case, team's respective leader. This is a relevant point in view of assuming that the direct leader is an excellent and reliable source of information regarding the teams' efforts to achieve their designated goals. Still, this study was conducted with real teams.

IMPLICATIONS FOR PRACTICE AND CONCLUSIONS

Since reflexivity demands time and energy, it is important to sustain and understand its implications (Shippers, 2013). Team's reflexivity can lead teams to learn from new experiences and therefore improve their workflows (Matsuo, 2018). It is considered a tool that naturally motivate teams that relish achieving its objectives (Shin et al., 2016).

Also, in critical situations, Zornoza et al. (2017) defend that make use of reflexivity is an alternative that is positively related to results improvement. Managers can promote and organizations can institutionalize moments of team reflection in order to benefit of its results in a long term (Shin et al., 2016).

Managers should invest time in providing environment for their teams to express their emotions without the fear of being punished or judged. It can be done by investing in inter-personal relationships and by adopting an opening and welcoming conduct when receiving suggestions, new ideas, different opinions or during the address of polemic

issues. Managers can stimulate the share of experiences in order to regulate the team's emotional state during initial interactions (Yang & Kelly, 2016).

When it comes to encourage a team's reflexivity, managers can promote meeting in which learnings from previous experiences can be shared while brainstorming about how a current issue or new demand can be solved. These moments are important tools to engage the team in decision-making and in setting goals.

The study of reflexivity has attracted increasing interest from the scientific community (Schippers et al., 2003; Tjosvold et al., 2004). This study is an attempt to contribute to the recent investigation of reflexivity. It also seeks to help understanding how expressing emotions can have a positive connotation and be profitable (hypothesis confirmed). Reflexivity did not present a strong effect on performance, opening opportunities to further studies. Regarding satisfaction with the team, reflexivity effect was positive. Also, the present investigation is an attempt to deepen the knowledge on reflexivity's role as a mediator, as a factor that influences team effectiveness and that can have practical implications for managers and teams to exist and to perform better as a team. The relationship between ECC and performance was fully mediated by reflexivity and the relationship between ECC and satisfaction with the team was found to be partially mediated by reflexivity. Therefore, reflexivity makes itself convenient as a strategy to manage environments' complexity and upcoming challenging activities (Tjosvold et al., 2004).

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