Master on Work, Organizational, and Personnel Psychology

Factors that promote collective orientation in work team members

Master Thesis

Maria Miguel Carvalho Rocha Pinto de Sousa

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

Home tutor:

PhD. Teresa Rebelo

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

Host tutor:

PhD. Carolina Moliner

Facultat de Psicologia: Universitat de València

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Abstract

One of the factors that has come to stand out as determinant of team effectiveness is collective orientation, the individuals' will to work in a collective way in a group context. If the relationship between collective orientation and team effectiveness already counts with several studies, it is recognized a scarcity of studies that empirically sustain which variables influence collective orientation of individuals, as team members and as an integral part of a team.

The present study aims to fill in the gap and to contribute to analyze the influence of some variables pointed out as potential antecedents of collective orientation, which are age, gender, place of residence, training on teamwork, and team psychological safety climate.

Of all the variables studied by us, only psychological safety climate showed a positive relation with team member's collective orientation. These results suggest that if an individual feels safe and comfortable, trusts in their team members, consequently will be able to take risks. We can say that a team climate characterized by mutual trust and respect, in which people feel safe, is key to have a positive outcome and it is key to have collective orientated members. Thus, this kind of team atmosphere promotes his or her disposition to work in a collective way.

Keywords:

Collective orientation, psychological safety, sociodemographic characteristics

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Introduction

In the present study, we are going to use both "group" and "team" terms interchangeably. However, despite this previous information, we are going to give the definition of team and group, since there are several authors that make this differentiation (e.g.; Bettenhausen, 1991; Lemoine, 1995; Wheelan, 1999; Savoie & Brunet, 2000). According to Lemoine (1995), the term "team", refers to an entity that focus in the field and that possess formal and explicit objectives. According to the same author, actors that work together with a well-defined goal and, have clear roles and functions compose "teams". In addition, in teams, the work is oriented to a very precise objective that it is very well aware and shared by every single element of the team. Salas, Cooke and Rosen (2008) defined teamwork as "the interdependent components of performance required to effectively coordinate the performance of multiple individuals" (p.541).

Marques, Dimas and Lourenço (2014) affirm that a group is not a closed system; it is integrated in a wider system, which suffers influence from it and influences it, as well. In the same line, Lourenço, (2002) defends the assumption that groups are made up from the inside out, as well as from outside-in. According to Lourenço and Dimas (2011), a group is a social system, composed by a group of individuals that interact regularly and in an interdependent way, with the purpose to achieve a common goal. In the same line, these authors emphasize that the group is a reality that transcends the individual experience, and so, it cannot be explained by it. This means that a group is considered as a whole, so it is not definable by the soma of individual contributions; it is a system, an alive identity that emerges in result of the mutual inter-relations established among their individuals (Lourenço & Dimas, 2011; Kozlowski & Bell, 2013; Zoltan & Vancea, 2015).

Moreover, to build up teamwork, it is noted the emphasis of having team members with collective orientation that would ease coordination and communication and consequently improve team performance (Driskell at al., 2010). Furthermore, according with these same authors, a scarcity of collective behavior on the part of team members can have severe consequences.

With regard to the term collective orientation, Driskell at al. (2010, p.317) define it "as the predisposition to work in a collective way in team settings", so the authors use the term to describe a team member who works well with others, track down others' input, contributes to the team outcome, and appreciate team membership. Recognizing the importance of having collective oriented individuals in a team, the focus of this study is this construct. Consequently, it aims to contribute to a better understanding of which factors promote this individual orientation. It aims to understand which demographic variables, such as age, gender, place of residence, training on teamwork and psychological safety climate positive influence collective orientation. Very few studies focus on this, which is why we strongly believe our study is important.

Thus, teams with collectively oriented members perform better than teams with non-collectively oriented members ((Driskell and Salas, 1992). Collective orientation, as well as trust and cohesion, for example, are seen as coordination and cooperation skills (Hagemann & Kluge, 2017). These skills are usually called emergent states that represent cognitive, affective and motivational states (Hagemann & Kluge, 2017).

Collective orientation

Alavi and McCormick (2004a) report that the term collective orientation has been conceptualized under the point of view of different perspectives: the behavioral approach (Driskell & Sallas, 1992; Miles, 2000; Watson Johnson & Merritt, 1998), the cognitive approach (Bandura, 1997; Mohammed & Dumville, 2001) and the individualism-collectivism approach (Earley, 1993; Eby & Dobbins, 1997; Wagner, 1995). Indeed, the last perspective is the one that we are going to focus on our study and the one that Alavi and McCormick (2004a) identify to be more appropriate.

Concerning the first perspective, the behavioral approach, and based on Driskell and Sallas (1992), Miles (2000), as well as on Watson Johnson and Merritt (1998), Alavi and McCormick (2004a) report that this approach is presented by the identification of teams' collective orientated behaviors, such as teamwork, sharing team goals and having high team standards. In addition, in matter of fact, collective behaviors are important in organizational contexts because organizations are composed of individuals who are required to work together (Watson, Johnson & Merritt, 1998). Driskell and Salas (1992),

tell us that research suggests that some team members are more collective orientated than others - that is, they exhibit more independent behavior in task groups- and this may affect team performance. The authors specifically argue that collective orientated team members benefit from group interaction: they are able to enhance their own performance by attending to others' task inputs; they benefit from the opportunity to pool information, share resources, and check errors that is afforded by the team environment (Driskell & Salas, 1992). In a way, collective orientation describes how much each individual values teamwork and is willing to get involved in group behaviors (Driskell at al., 2010). According to Alavi and McCormick (2004a), the behavioral approach does not seem to be appropriate for collective orientation. The term orientation generally refers to basic beliefs, preferences, or tendencies rather than to exhibited behaviors. According to Alavi and McCormick (2004a), and based on others authors such as, Mohammed & Dumville (2001) and Cannon-Bowers, Salas and Converse (1993), individuals' behaviors in team contexts may partly be manifestations of their belief systems such as their beliefs about themselves, the others, and their team tasks.

With respect to cognitive approach, several authors adopt this perspective of collective orientation, such as Mohammed and Dumville (2001) or Cannon-Bowers, Salas and Converse (1993). Mohammed and Dumville (2001) mention that the notion of a team mental model was developed to help to understand differences in performance among teams. For Klimoski and Mohammed (1994), team mental models are team members' shared, organized understanding and mental representation of knowledge about key elements of the team's relevant environment. Therefore, teams look forward to rapidly adjust to the tasks by sharing their mental models, where team members will predict other team members' actions and what they will need to carry it out (Cannon-Bowers et al., 1993). According to Mohammed and Dumville (2011), group members may attempt to resolve different types of issues and develop collective representations of decision issues. In addition, cognitive consensus refers to similarity among group members regarding how key issues are defined and conceptualized. In this line, these same authors say that team effectiveness will improve if team members have an adequate shared understanding of the task, team, equipment and situation.

According to the individualism-collectivism approach (the third perspective), collective orientation is conceptualized in the individualism-collectivism continuum with

the aim to understand the human pattern of interactions that occur in groups and organizations (Earley & Gibson, 1998). Triandis (1995) considers that in the same culture either can emerge individualistic or collectivist individuals. Regarding organizational culture, Eby and Dobbins (1997) pointed out that individualism has been characterized as a tendency or preference to work alone while collectivism has been seen as the preference for working in group. Triandis (1995, 1996) proposed two important dimensions for individualism and collectivism. He conceptually recognized and integrated the following two important dimensions of self in a social relations context: independence and/or interdependence and sameness and/or differences. The degree to which individuals perceive themselves as interdependent or independent exists along a mutually exclusive continuum; individuals can adjust their perception of the self from one extreme to the other (Powers, 2013).

Alavi and McCormick (2004b) refer the following two dimensions that were suggested by Triandis (1995, 1996) for individualism and collectivism: vertical and horizontal. According to Triandis and Gelfand (1998), the term *vertical* was used when referring to perceived different self or subordination. However, the term *horizontal* was used when referring to similarity. Thus, vertical collectivism refers to a sense of serving the in-group and sacrificing for the benefits of the in-group and doing one's duty while horizontal collectivism refers to a sense of social cohesion and of oneness with the members in the group. Regarding individualism, vertical individualism emphasizes independence and differences between individuals, thus vertical individualists tend to perceive themselves as different from others and may consequently behave competitively with others in order to win in competitive situations. On the other hand, horizontal individualism emphasizes independence but sameness, thus horizontal individualists may carry out their own tasks without the restraints provided by in-groups.

Triandis (1995) proposed allocentrism and idiocentrism as equivalent terms of collectivism and individualism at the individual level (Alavi & McCormick, 2004b). According to Triandis and Suh (2002), idiocentrism can be defined as a personal attribute, which consists of an emphasis on self-reliance, competition, uniqueness, hedonism and emotional distance from-in-groups, whereas allocentrism can be defined as a personal attribute composed of a focus on interdependence, sociability, and family integrity. Thus, allocentric individuals take into account the needs if in-group member, feel close in their

relationships to their in-groups, and appear to others as responsive to their needs and concerns. In line with these definitions, Iliste (2017) characterizes an idiocentric as a person whose thought patterns and perceptions, and in extensional emotional response to situations, as well as ways of behaving and interacting with others, is guided by the assumption that she/he is an autonomous individual who is supposed to be self-reliant and strive for self-fulfillment. On the other hand, an allocentric is an individual whose patterns of thought, perception, emotional response, and behavior, are guided by the assumption that she/he is an interdependent part of a collective, and as such, she/he should provide support for the members of the collective, as well as expect support from the others in return.

According to Alavi and McCormick (2004b), the "individualism-collectivism approach is the one that a team member's collective orientation can be arguably conceptualized in terms of vertical and horizontal dimensions of allocentrism and idiocentrism (Figure 1). In addition, they argue that, in a team context, horizontal idiocentrics may believe themselves to be independent from and similar to other teammates, whereas vertical idiocentrics may emphasize being different from other members, they may perceive themselves as superior to other teammates and may consequently try to lead others or win in the team's discussions. However, on the other hand, and also according to Alavi and McCormick (2004b), horizontal allocentrics may perceive themselves to be interdependent with other teammates and consequently are very likely to exhibit cooperative behavior, however, they may not be likely to sacrifice their self-interests for the sake of their teams if required. On the contrary, vertical allocentric members may do so because of their subordinate perception of self to the teams – since we will not focuses on this dimension because in this case, team members have the perception of "self" as interdependent with other team members and subordinate to them (Alavi & McCormick, 2004b).

	interdependent self	independent self
vertical self	**vertical allocentrism:** perception of 'self' as interdependent with other team members and subordinate to the team.	**vertical idiocentrism:** perception of 'self' as independent from and superior to other team members.
horizontal self	**horizontal allocentrism:** perception of 'self' as interdependent with and similar to other team members.	**horizontal idiocentrism:** perception of 'self' as independent from and similar to other team members.

Figure 1: Different dimensions of collective orientation in team contexts
      (Retrieved from: Alavi & McCormick, 2004b, p. 117)

The present study focuses the dimension *horizontal allocentrism* proposed by Alavi and McCormick (2004b, 2007). We want to study the factors that promote the collective orientation of individuals when they are acting as members of a group, and a group is defined as a set of individuals that interact regularly and in an interdependent way, with the purpose to achieve a common goal (Lourenço & Dimas, 2011). We consider that the horizontal allocentrism dimension, which concerns to individual collective orientation based on the perception of "self" as interdependent and similar to other team members, the more suitable to contribute to achieve team goals. Alavi and McCormick (2004b) give us a good example when say that an individual may mostly activate his schemas of horizontal allocentrism when performing conjunctive tasks in which every team member may be required to work interdependently with other team members.

Consequences of Collective Orientation on Team Effectiveness

Several authors (e.g., Driskell et al., 2010; Early, 1989, 1993; Eby & Dobbins, 1997; Milles, 2000; Wagner et al., 2012) argue that collective orientation has a positive effect on group effectiveness. Moreover, several studies have already give empirical support to this positive relationship. Driskell & Salas (1992) conclude that in collective orientated teams, team members have benefits in working as a team (e.g., the opportunity to share resources and fixing errors). In addition, Eby and Dobbins (1997) mention that

as the number of collectively oriented team members' increase, the greater the exchange of effort and information within the team. Thus, Edmondson's study (1999) and Druskat and Kayes (2000) research show that exists a positive relation between collective orientation and group effectiveness. Authors such as Lang (2001), Michailova and Hutchongs (2006) also defend that in groups where exist more collective orientated people, the effectiveness and learning will be superior, because there is a larger reflection and discussion about ideas and results. In addition, Grilos' (2017) study revealed a positive effect of collective orientation on group effectiveness.

However, if the relationship between collective orientation and team effectiveness already counts with several studies, it is recognized a scarcity of studies that empirically sustain which variables influence the level of collective orientation of individuals as team members (Grilo, 2017). The present study aims to contribute to fill this gap. Thereby, it aims to analyze the influence on collective orientation of some variables pointed out as potential antecedents of this construct, which are age, gender, place of residence, training on teamwork, and team psychological safety.

Hypotheses rationale

Regarding age, Hui and Yee's (1987) study reported that traditionalism tends to be higher among those in the older cohorts. Accordingly, Hui and Yee (1994) hypothesized a positive correlation between age and collectivism. Their study was carried out with a Chinese sample and they reported that "age" was positively correlated with collectivism in their study. We aim to understand if the variable "age" (chronological age) could also be an antecedent of team members' collective orientation belonging to other culture. For that reason, and based on Hui and Yee's findings, our first hypothesis:

H_1: In team context, age is positively related with collective orientation.

Concerning gender, in the cross-cultural research of Hofstede's (1980), individualism was found to be conceptually and empirically linked with masculinity, and collectivism with femininity. Additionally, attitudes and behaviors regarded as individualistic are more often observed among men than among women (Eagly, 1987, in Hui & Yee, 1994). So, according to Hui and Yee's study (1994), it was reasonable to expect that males tend to be more individualistic while females more collectivist.

However, after the study was complete, no significant gender differences were observed nor supported. For this reason, and trying to contribute for clarifying if there are differences on collective orientation regarding gender, we retake the hypothesis of Hui and Yee (1994) in order to test it in our sample:

H_2: In team context, women tend to be more collective orientated than men.

In relation to the place of residence, Hofstede (1984) described the scope of culture differences as they were revealed by research in more than 50 countries around the world and discussed how these differences affected the validity of management techniques. To Hofstede (1984) people build organizations according to their values, and societies are composed of institutions and organizations that reflect the dominant values within their culture. According to Hofstede (1991), ethnic and other in-group differences within the group play a role in the integration process, and managers within a collectivist culture will be attentive to such factors. For this author, within countries with a dominant individualist middle-class culture, regional rural subcultures have sometimes retained strongly collectivist elements. Therefore, the place of residence could play a role in the collective orientation of individuals and consequently we formulate our fourth hypothesis:

H_3: Individuals that live in a rural zone have higher collective orientation as team members than those who live in urban areas.

Lastly, concerning training on teamwork, for Eby and Dobbins (1997) training and organizational development efforts can be aimed at affecting team member expectancies and efficacy beliefs, which in turn may influence cooperative team behavior ant team performance - as the more collective orientated teams are the more will increase the cooperation among team members (Eby & Dobbins, 1997). Therefore, we can expect that training on teamwork can play a positive effect on team members' collective orientation, since in this kind of training, topics such as collaboration, interdependence, information sharing, are approached and related behaviors are stimulated and trained. Thus, our fourth hypothesis is:

H_4: Previous training on teamwork has a positive relationship to team members' collective orientation.

In addition, this study also aims to understand if a team psychological safety climate, i.e., a team atmosphere characterized by mutual trust and respect, in which people feel comfortable to be themselves, because of the shared belief that the group is safe for taking interpersonal risks (Edmondson, 1999), positively influences team members to work in a collective way. This objective is based on the argument that individuals can have different types of collective orientation in different types of teams, which can be attributed to their teamwork experiences (Eby & Dobbins, 1997; Triandis, 1995). Edmondson (1999) introduces psychological safety and places it as a type of climate and, thus, an antecedent variable of group processes such as team learning. We can perceive it also, as a good precedent for collective orientation.

Hence, when individuals work as members of a team, they select a set of beliefs that are connected to that specific context and, for that reason, they activate different kinds of collective orientation in different types of team (Alavi & McCormick, 2004, 2007). Thus, team psychological safety could act as a potential antecedent of members' tendency to show collective-oriented behaviors. Accordingly, our hypothesis is that:

H_5: The individuals' perception of a psychological safety climate in the team is positively related to their collective orientation.

Since there is no recent literature on this topic, that focus on the antecedents, there are aspects that have remained undeveloped since then. Thus, we strongly believe on the relevance of this study.

Methodology

Sample

The sample consists of 353 subjects, 33% of the male gender and 67% of the female gender. The mean and standard deviation of their ages is 38.12 and 12.37, respectively, with a minimum of 18 and a maximum of 70. The average team tenure is 5.52 years ($SD = 7.25$), with a minimum and a maximum of 0.03 and 46 years. Sixty-three percent of the subjects have a level of education equal to or lower than the 12th year of schooling, and the remaining 36.70% of the respondents are graduates or have a higher level. According to previous training on teamwork, 62.74% of the participants already

had it and 37.3% did not have. Relatively to the place of residence, 39.71% of the respondents live in an urban area and 37.01% live in a rural area. They are team members from 82 teams (belonging to 57 distinct organizations), with a mean size of six members (6.41), a standard deviation of 3.56, a minimum of three elements and a maximum of 18. As regards the size of organizations, most are micro or small size (42% have up to 10 elements and 18.53% between 11 and 49) and belong to the tertiary sector of activity (72.52%).

Data collection procedures

For the sample, the sampling method was through convenience or accessibility (Hill & Hill, 2012). Therefore, a personal contact was made, orally and/or by email, with the hierarchical superiors of organizations that were constituted by teams that, corresponded to the necessary requirements to be part of the present sample. In this initial contact, with the team leaders and team members, there was a general explanation about the present investigation.

To the organizations and work teams interested in collaborating in the project, the ethical presuppositions of investigation in psychology were secured . All teams consisting of three or more elements that shared common and valued objectives and worked in an interdependent and adaptive way to achieve them, were considered valid for inclusion in this sample (Lourenço, 2002). With regard to informed consent, all organizations and their participants signed an informed consent statement in which they voluntarily participated in the present study. In addition, the confidentiality and anonymity of the data is guaranteed.

In addition, whenever requested, meetings were held with the management of the organizations that so required, in order to clarify and plan the collection of information.

 Whenever it was possible, the questionnaires were administered in person, with the purpose of accompanying the individuals during the filling of the same and clarifying any doubts that might arise.

When the questionnaires were not applied face-to-face, or were filled out online, the team leader was asked to distribute them by their collaborators. Once completed, the

questionnaires of all members of a given team were placed in an envelope, and the confidentiality and anonymity of the data was also ensured.

Measures

Our study is a cross sectional and exploratory study. To carry out the present study, we used the questionnaire as data collection technique. This technique allows a considerable amount of data to be collected in a short time, can simultaneously reach several people, and can therefore cover a wider geographical area (Mitchell & Jolley, 2010). In the first part of the questionnaire, the demographic questions were asked (Annex 1). The variable age was asked with no restrict answer. The variable gender has two options ("male" or "female"). The variable place of residence had three options of response, "urban", "semi urban" or "rural". In the question regarding training in teamwork, the type of response corresponded to "yes" or "no".

For measuring collective orientation, we used the scale from Alavi & McCormick (2004b, 2007), *Collective Orientation – Horizontal Allocentrism Factor*, that consists of 7 items (Annex 2), presenting a response scale that varies from 1 (highly disagree) to 7 (highly agree).

Since we are using a scale that was previously used in Portuguese, in Grilo's (2017) study, the author did the respective adaptation for the Portuguese version. Therefore, for the development of the Portuguese version, primarily she did the translation, in which was review by English experts, secondly a pilot study was made, with a team of four people. Through the application of the study-test to a pilot sample, they verified the adequacy and time of filing of the questionnaire, and the clarity and comprehension of the items of the scale. Posteriorly, using IBM SPSS (version 22.0), and with the goal of evaluate the psychometrics properties, a principal component analysis was carried out.

With the aim of assessing construct validity, we submitted the scale to a principal components analysis. Since item 6 presented a low communality (1.7) and saturation (.41), we removed it from the initial exploratory factorial analysis (AFE). We, then, submitted the five items to a principal components analysis, with the free extraction of factors. The solution was satisfactory, suggesting the retention of a factor that explains 61.07% of total variance, with a specific value of 3.05. All the items present high

saturations, with the lowest being of .71 (item 5) and the percentage of common variance in the variables that is explained by the extracted factor (communalities) is, in all the items, higher than 40%, with the lowest value being of 51%. The internal consistency of the five items revealed a Cronbach alpha of .83.

Regarding psychological climate safety, we used the *Team Psychological Safety* scale developed by Edmondson (1999). It consists of 7 items (Annex 3), with a Likert scale of response varying between 1 (*Very inaccurate)* and 7 (*Very accurate).* This scale was used and adapted for Portuguese by Ferreira's (2017). Posteriorly, the scale was submitted to principal component analysis.

The scale was subjected to exploratory factorial analyses in principal components from this study (N=353), showing a KMO value of .66., supported by the Bartlett's Test of Sphericity, which was statistically significant [$\chi^2(3) = 190.2$, $p < .001$], showing that the inter-correlations between variables, when are considered together, are significantly different from 0. Both indicators suggest that factorial analyses is appropriate.

The scale was, subsequently, subjected to an analysis of principal components. A unidimensional solution was found composed by three items (2, 4 and 7), explaining 62.62% of total variance, with a specific value of 1.9, all communalities above .40 and factorial saturation above .50. Cronbach alpha obtained for the scale was of .70.

Statistical Procedures

We are working with four predictor variables that are on an individual level, which are age, gender, place of residence and training on teamwork. We only have one predictor that theoretically is at group level, which is team psychological safety. Moreover, our criterion variable (horizontal allocentrism dimension of collective orientation) is an individual level variable. Therefore, we decided to analyze all the variables on the individual level in a first step using standard multiple regression. However, since team psychological safety is a group level variable, if this construct reveals itself as a significant predictor of collective orientation, a multilevel random coefficient (MRC) model will be conducted to reinforce this finding.

According to Tabachnick and Fidell (2007), in regression analyses can be used either continuous or dichotomous predictors. For these authors, a variable that is initially discrete can be used if it is first converted into dummy variables, a set of k-1dichotomous variables coded with 1 and 0. When the new variables are entered into regression as a group, the variance due to the original discrete predictor is analyzed, and, in addition, one can examine effects of the newly created dichotomous components (Tabachnick & Fidell, 2007). Thus, after we decided that we were going to use multiple regression analyses, we transformed two categorical variables, such as, "place of residence" and "training on teamwork" into dummy variables.

In addition, we tested the regression assumptions, such as absence of multicollinearity, severe outliers, linearity, normality, residuals' independence and homoscedasticity (Tabachnick & Fidell, 2007). These tests revealed satisfactory results.

Results

Table 1 presented the means, standard deviations, and correlations between age, gender, dummy variable1 for place of residence, dummy variable2 for place of residence, dummy variable for training on teamwork and psychological safety.

Table 1. Descriptive statistics and correlations

Variables	M	SD	1	2	3	4	5	6	7
1. Age	6.21	.64	–						
2. Gender	37.94	12.37	–.128*	–					
3. Dummy Place of Residence	.67	.47	.020	-.047	–				
4. Dummy Place of Residence	.23	.42	-.057	.114*	-.446**	–			
5. Training on teamwork	.41	.49	.050	-.134*	.017	.070	–		
6. Collective orientation	.62	.48	–.044	.050	- .028	.034	-.076	–	
7. Psychological Safety	4.82	1.30	-.217**	-.048	-.008	-.047	-.032	.398**	–

*Note: * $p<.05$; ** $p<.01$; *** $p<.001$ level, (2-tailed).*

In terms of the analysis of our model and according to Table 2, we used standard multiple regression analyses as previously mentioned. We observed that age does not present a statistically significant relationship with collective orientation so hypothesis 1 was not supported. Regarding gender, there was no significant result with collective orientation and hypothesis 2 was also not supported. Concerning place of residence and training on teamwork variables, no significant results were found, thus hypotheses 3 and 4, respectively, were also not supported. Lastly, psychological safety is positive and significantly related with collective orientation, so hypothesis 5 was supported.

Table 2. Regression analysis summary

Variables	B	SE	β
Age	.003	.003	.058
Gender	.089	.071	.065
Dummy Place of Residence	-.007	.087	-.004
Dummy Place of Residence	.065	.076	.049
Training on teamwork	-.070	.069	-.052
Psychological Safety	.201	.029	.409*

Note $R^2 = .167$ (*$p < .05$)

As already mentioned, in face of a positive and significant relationship between team psychological safety and collective orientation, a multilevel random coefficient (MRC) model was conducted in order to reinforce the result obtained in the standard regression analysis. This analysis was computed on R software.

First, it is necessary to examine the intercept variability (γ_{00}) by estimating an unconditional means model (or null model). An unconditional means model does not contain any predictors, but includes a random intercept variance term for groups (Bliese, 2013). If γ_{00} does not differ by more than chance levels, the assumptions of OLS regression techniques are not violated and there is no need for HLM analyses. An unconditional means model was run for the individual-level dependent variable of

interest: members' collective orientation. Results revealed that 13% of the variation in member's collective orientation score is a function of the group to which he or she belongs (ICC(1) = .13). Then, one must determine whether γ_{00} is significant by comparing a model with a random intercept (model 1) with a model without a random intercept (model 2). The difference of 9.60 (*p*=.002) between models 1 and 2 is significant on a Chi-Squared distribution with one degree of freedom. Therefore, a model that allows for random variation in collective orientation among teams is better than a model that does not allow for this variation. Team psychological safety was entered in the equation in the second step. As it can be seen in Table 3, the positive relationship of team psychological safety with members' collective orientation is significant (*B* = 0.19, p < .001). Thus, this multilevel analysis reinforces the positive relationship between this kind of team climate and the team members' collective orientation that already emerged in the standard regression analysis previously carried out.

Table 3. MCR results for member's collective orientation

Variables	*Model 1*	*Model 2*
	Coefficient (SE)	Coefficient (SE)
Intercept	6.22 (0.04)***	5.31 (0.12)***
Team psychological safety		0.19 (0.02)***
LL (logLik)	-338.28	-315.01

Notes: Unstandardized coefficients are reported with standard errors in parentheses. *** *p < .001*.

Discussion

The main goal of our study was to analyze if a set of demographic variables and a group-level variable had an impact on team member's collective orientation. In order to have more knowledge about which antecedent or antecedents had an impact on team members' collective orientation we created five hypotheses and tested them.

According to our first hypothesis, we expected that older people would be more collective orientated that younger workers when working in teams. For this hypothesis, we based on Hui and Yee's (1987) study, which hypothesized that older workers could potentially be more orientated. In our study, this hypothesis does not receive empirical support, so we cannot suggest that age is a factor that influences collective orientation. In addition, Arvey and Murphy (1998) say that, this demographic variable entails a counter-argument that says that age-related declines in health inevitable lead to decreased job performance as workers' age increases. A possible explanation for the differences between Hui and Yee's study and our study could be grounded in cultural differences. In fact, Hui and Yee's worked with a Chinese sample whereas our sample is made up of Portuguese individuals. Another potential explanation is related to the fact that the newest generations, specially the millennials, tend to have the teamwork concept as one of their values. According to Wilson and Gerber (2008), millennials work in task groups and are skilled in cooperative effort. In fact, the millennials generation, "are developing strong team instincts and tighter peer bonds" according to Strauss and Howe (2000, p. 44).

In regard our second hypothesis, we expected that women would be more collective orientated than men. Because we based ourselves in Hofstede's 1980 research where he found that collectivism would be linked to femininity. Thus, Hui and Yee's study (1994) hypothesized that women would be more collective orientated than men. However, their findings only partly supported this hypothesis and they did not found conclusive differences regarding gender differences on collective orientation. Our study does not support gender differences suggesting that women and men, as team members, do not differ in terms of working in a collective way. This would be a clue for future research in order to analyze if there are specific cultural contexts where women or men tend to be more collective orientated and stand out on it in their teams.

We based our third hypotheses in Hofstede's studies (1984, 1991). The author studied culture differences in more than 50 countries and he mentioned that people build organizations according to their values, and those values reflect within their culture. As previously mentioned, Hofstede's studies suggested that even within countries with a dominant individualistic middle-class culture, regional rural subcultures had sometimes retained collectivist elements. This result led us to analyze if the area where team members live will affect their collection orientation. The results obtained in the present

research did not reveal differences on collective orientation between rural, urban, or semi-urban individuals. For future research, a possible hypothesis could be, instead of studying place of residence in terms of rural, urban or semi-urban, to study the place of residence in terms of countries, because some countries are collective orientated than others and national cultures could influence the individual willingness for working in a collective-oriented way in teams.

According to our fourth hypothesis, we were expecting that previous training on teamwork would have a positive relationship with team member's collective orientation. Based on authors such as Eby & Dobbins (1997), we expected that someone that has previous training on teamwork would be aware of some important attitudes and behaviors for team effectiveness, such as being collectively oriented. However, in our sample, training on teamwork is not related with team members' collective orientation. A possible explanation could be that this training on teamwork did not sufficiently focus collective orientation. Harter (1999) suggests that the collective orientation of an individual is not set and so, it can be individualistic or collectivist, having in consideration his or her context and social needs. Individuals can learn, adapt, and develop skills, highlighting the utility of trainings according to communication, cooperation, coordination skills that can stimulate the collective orientation. Thus, it would be interesting in future research to investigate, by means of a quasi-experimental design, if training on collective orientation positively differentiates team members with this training from team members without it.

Lastly, our fifth hypothesis, relating team psychological safety with collective orientation, was supported. We can say that a team climate characterized by mutual trust and respect, in which people feel comfortable to be themselves (Edmondson, 1999), is key to have a positive outcome and it is key to have collective orientated members. As previously mentioned, individuals select a set of beliefs that are connected to a specific context and, for that reason; they activate different kinds of collective orientation in different types of teams (Alavi & McCormick, 2004, 2007). Thus, our results suggest that is crucial that an individual feels safe and comfortable and trusts in other members. In order to be able to take risks, this kind of team atmosphere promotes his or her disposition to work in a collective way.

Conclusions

According to Wagner (1995) and Wagner et al. (2012), team efficiency and team performance only tend to rise up when there is a high level of members' collective orientation. If teams are in fact an essential mechanism in today's competitive organizations, it is beneficial and important for researchers and practitioners to know more about how common they are and how they can improve relations and effectiveness (Devine et. al., 1999).

Given the importance and interest to create and develop effective teams inside organizations, and according to our literature review, given the lack of studies on the determinants of team collective orientation, we proposed to study several factors that could increase team member's collective orientation (Driskell at al., 2010; Hagemann & Kluge, 2017). We studied five variables, four demographical variables, such as age, gender, place of residence and training on teamwork, and one group-level variable that was psychological safety climate in teams.

We believe that a positive point of our work is that the findings highlights what are the factors that are going to increase collective orientation in team-groups. They suggest that personal and demographic variables, such as age and gender, are not influencers of a collective orientated team. They point to that other variables, such as place of residence and previous training on teamwork, are not going to influence either. However, our work point to the importance of the climate that is created in the team, namely a psychological safety climate, which has a positive impact on team member's collective orientation. It shows in future researches and in organizations what should in fact be built in terms of team functioning for promoting team members' collective orientation.

Nevertheless, in terms of limitations, if the number of groups and subjects of our sample is a positive point of this study, they are only from Portuguese organizations, doesn't allow us to see if the results would differ if we had organizations form different countries and different cultures. Therefore, the sample method by convenience used impairs the generalization of results. In addition, the fact that the sample does not include/ represent these other scenarios can be a limitation.

In spite of its limitations, this study suggests that a psychological safety climate, where individual can be themselves and feel supported, is going to have a positive impact on team member's collective orientation. Task conflict that occurs in a psychologically safe environment should improve creativity and decision making without damaging interactions (Bradley et. al., 2012). In this way, psychological safety may amplify the involvement of each team member and the intensity of interactions among teammates without endangering the harmony of the team, thereby increasing team performance (Bradley et al., 2012). In addition, our sample is only from Portuguese companies, and so, we can not conclude if the results would be the same if the sample was composed by organizations from different countries and with different cultures.

Another limitation that we see is because perhaps, a longitudinal design could give more solidity to the test of the hypothesis – especially with the psychological safety – because with more time, the feeling of belonging and safety could possibly increase.

In addition, we consider as a limitation, the fact that the type of answer in the question of "training in teamwork" can be a limiting factor. Maybe if we had questioned the type of training, the frequency or even the duration of the training, we could have gotten different results.

From here, it comes a clear practical implication: this study gives managers clues on how to promote team members' collective orientation (such as psychological safety climate) in order to offer different possibilities of intervening for enhancing collective orientation in their teams. Team leaders must assure that, in their teams there are cooperation, interdependency and there are a safe environment (Edmondson, 1999). Indeed, individuals must feel free to speak for themselves, and feel that they have a voice and an impact on the team (Edmondson, 1999).

With this type of surroundings, as we previously mentioned, team members tend to be more collective orientated, contributing to team effectiveness. Thus, it would be beneficial to promote collective orientation on team members, through interventions at the team group' levels, and, at the same time, trying to incentive certain individual values, such as sense of sharing and cooperation.

In the organizational world where is increasingly harder to keep young talents within the company, managers and directors must take actions and understand the deeper

meanings and reasons why retention is so hard nowadays. As previously mentioned, contributing to team effectiveness and promoting collective orientation within the teams inside organizations, would exponentially increase the feeling of belonging.

As for future investigations, it would be very interesting to study the Millennial's generation and understand how this generation is connected with teams and collective orientation. Since so far, we know that the preference of Millennials for working in teams and their concomitant inclination towards social networking offers numerous advantages (Wilson & Gerber, 2008). Understanding the reason behind on why younger people tend to be more collective orientated and how organizations could take advantage from it.

As another future investigation, it could be studied the Collective Orientation of Team Leaders. Since they have a different type of responsibility, the engagement can different and consequently they can be more collective orientated towards a work team.

In addition, in a future study we could study other characteristics, but of the own team- such as the size of the team, the development phase in which it was when the study was done, the type of maturity of the team members. A series of variables that are emerging in the new era of organizations.

Regarding moderating or null variables, which could be included in future studies - from training in Collective orientation - perhaps variables such as the involvement of the leadership in promoting / reinforcing Collective Orientation can be a moderating variable. Since even with training, if leadership does not reinforce these behaviors, the effect of training may be less lasting or void compared to leaders who promote it (here the effect of formation can be amplified and longer lasting because people are encouraged and reinforced to have this type of guidance.

Lastly, since there are no significant contributions to age / gender, a good clue to future investigations would be to study whether a greater or less diversity / homogeneity of age or gender could have an impact on the collective orientation and why.

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ANNEX

Annex 1

PARTE 1

(Dados demográficos - para fins exclusivamente estatísticos)

Idade: _____   Sexo: M □   F □

Como caracteriza a sua zona de residência? Urbana □ Semiurbana □ Rural □

Já teve formação em trabalho de equipa? Sim □   Não □

Annex 2

(Orientação para o coletivo)

Pensando agora no **trabalho em equipa de uma forma geral**, pedimos-lhe que indique em que medida concorda ou discorda das seguintes afirmações, assinalando com uma cruz (x) a opção que melhor se adequa à sua situação, utilizando a seguinte escala":

1 Discordo fortemente	2 Discordo	3 Discordo em parte	4 Não concordo nem discordo	5 Concordo em parte	6 Concordo	7 Concordo fortemente

	1	2	3	4	5	6	7
1. Sinto-me bem em ser membro deste grupo.							
2. É importante para mim manter a harmonia dentro do grupo.							
3. É importante para mim consultar outros membros do grupo e conhecer as suas ideias antes de tomar decisões sobre as minhas tarefas.							
4. Gosto de ajudar outros membros do grupo quando estes têm problemas no desempenho das suas tarefas.							
5. No grupo, respeito a opinião da maioria.							
6. Gosto de trabalhar de modo interdependente com outros membros do grupo.							

Annex 3

(Segurança psicológica)

De seguida apresentamos algumas afirmações **acerca da sua equipa de trabalho**. Pedimos-lhe que nos indique em que medida as afirmações se aplicam ou não se aplicam à realidade da sua equipa. Para isso, assinale com um X, à frente de cada afirmação, o valor que melhor corresponde ao que, em sua opinião, acontece na sua equipa de trabalho. Utilize, por favor, a seguinte escala:

1 Não se aplica	**2** Quase não se aplica	**3** Aplica-se pouco	**4** Aplica-se moderada-mente	**5** Aplica-se muito	**6** Aplica-se quase totalmente	**7** Aplica-se totalmente

	1	**2**	**3**	**4**	**5**	**6**	**7**
1. Se nesta equipa cometemos um erro, este é frequentemente usado contra nós.							
2 . Os membros desta equipa são capazes de abordar problemas e assuntos difíceis.							
3.Por vezes, as pessoas desta equipa rejeitam outros por serem diferentes.							
4.Nesta equipa é seguro arriscar.							
5.É difícil pedir ajuda a outros membros da minha equipa.							
6.Ninguém desta equipa tentaria, deliberadamente, prejudicar os meus esforços.							
7.Quando trabalho com os outros membros da equipa, as minhas competências e talentos únicos são valorizados e utilizados.							