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Workgroup Diversity and Team Outcomes

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Master in Human Resource Management and Organizational Consulting

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October, 2020



BUSINESS
SCHOOL

Department of Human Resources and Organizational Behavior

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RESUMO

O objetivo deste estudo é explorar a relação entre diversidade em grupos de trabalhos e desempenho de equipas, quando mediado pela elaboração de informações relevantes às tarefas. Examinamos ainda o papel moderador da diversidade que acredita na segurança psicológica, com intuito de compreender o seu impacto na relação entre diversidade do grupo de trabalho e a elaboração de informações relevantes às tarefas. Duas dimensões de diversidade foram escolhidas para analisar, nomeadamente orientação sexual e idade. Foi usado um tamanho de amostra de 45 equipas de várias empresas de consultadoria na Europa. Os resultados mostram uma mediação dessa relação entre diversidade do grupo de trabalho e a elaboração de informações relevantes às tarefas, não significativa. Em relação aos efeitos moderadores, diversidade de crenças sobre orientação sexual e idade não revelam um efeito significativo na relação entre diversidade do grupo de trabalho e a elaboração de informações relevantes às tarefas. Porém, segurança psicológica mostra um papel de moderador significativo nessa relação, isso significa que quando a segurança psicológica é alta, os membros de equipa são mais propícios a empenharem-se na elaboração de processos de informação.

PALAVRAS-CHAVE: Diversidade em Equipas, Elaboração de Informações Relevantes às tarefas, Orientação Sexual, Idade, Diversidade Crenças, Segurança Psicológica

ABSTRACT

The study aims to explore the relationship between workgroup diversity and team outcomes, when mediated by the elaboration of task-relevant information. Two diversity dimensions were chosen, namely sexual orientation and age. Moreover, we considered team outcomes measuring team performance and creativity. We further examined the moderating role of diversity beliefs and psychological safety in order to understand their impact on the relationship between workgroup diversity and the elaboration of task-relevant information. A sample size of 45 teams from various consultancy companies in Europe was used. Results show a nonsignificant mediating effect of the elaboration of task-relevant in the relationship between workgroup diversity and team outcomes. When examining the mediating effects, diversity beliefs regarding both sexual orientation and age did not reveal a significant effect on the relationship between workgroup diversity and the elaboration of task-relevant information. As for diversity beliefs, also psychological safety shows a non-significant moderating role on the relationship, meaning that when psychological safety is high, team members are not more likely to engage on the elaboration of information processes.

KEYWORDS: Workgroup Diversity; Elaboration of task-relevant Information; Sexual Orientation; Age; Diversity Beliefs; Psychological Safety

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1. INTRODUCTION

The concept of diversity and work group diversity is gaining increasing attention in today's organizational life. The extraordinary speed of change in demographic and functional diversity of the workforce requires a prompt response from the management and organizational behavior field and as for now, it seems that scholars are producing inconsistent results. The need for a rapid response comes from the particular urgency to understand whether group diversity led to potential positive or negative effects in the workplace (Brief, 2008).

The purpose of the study is to examine, on a group level, two different diversity dimensions regarding workgroup diversity, namely sexual orientation and age, and its relationship with team performance outcomes. We define "diversity" according to Van Knippenberg, Dreu and Homan (2004), such as the "differences between individuals of any attribute that may lead to the perception that another person is different from self". As a result of the categorization of another person as different from self, there will be negative consequences for groups (Harrison, Price & Bell, 1998; van Knippenberg et al., 2004). In contrast, the other body of research proposes that informational diversity is beneficial for group performance. (Van Knippenberg et al., 2004). In order to overcome this paradox, the categorization-elaboration model integrates both perspectives. Throughout the reconceptualization of the CEM proposed by Van Knippenberg et al., (2004) this study aims to explore the role of the elaboration of task-relevant information as a **mediator** in the relationship between workgroup diversity and team outcomes, measured as team performance and creativity. For the current research, team performance will be treated as a dynamic process in order to investigate how the wide knowledge pool and diversity traits of each member are combined to accomplish tasks (Kozlowski & Ilgen, 2006). The research further investigates to what extent psychological safety and diversity beliefs **moderates** the relationship between diversity and the elaboration of task-relevant information. We interact with teams every day and their effectiveness is important to a wide range of societal functions (Kozlowski et al., 2006). The reason behind the choice of taking teams as level of analysis is based on the fact that the nature of work has changed and there is a need to integrate a demographically heterogeneous workforce (Salas, DiazGranados, Klein, Burke, Stagl, Goodwin & Halpin, 2008). Thus, it seems necessary to speak about diversity related to teams since individuals composing each team is different, having unique personality and characteristics. Overall, the focus is on 4 diversity dimensions considered in the data collection and analysis: nationality, age, sexual orientation and educational background. However, due to length and time limitations, I have chosen two specific diversity traits to discuss in the study, more in detail

sexual orientation and age. I have decided to focus on those dimensions of diversity because they are highly relevant in today's working environment, which is characterized by intercultural collaboration and openness. For instance, recognizing and protecting diversity in terms of sexual orientation has become a "social and economic imperative" (King & Cortina, 2010). Despite the bulk of studies related to race, ethnicity and age, it is not always clear to understand if a non-readily difference such as sexual orientation can produce consistent effect to the organization's performance. With this purpose, our final desire is to contribute to the body of knowledge about the perceptions of people's differences in terms of these four aforementioned dimensions, regarding the direct impact on the process of elaboration of task-relevant information and the indirect impact on the organizational performance.

2. LITERATURE REVIEW

2.1 Workgroup diversity

The concept of diversity and work group diversity is gaining increasing attention in today's organizational life and its importance mainly comes from the free movement of labor due to globalization and the fight for human rights by specific minority groups, who felt excluded from the employment sector. Therefore, the importance of workforce diversity emerged to further the availability of equal opportunity in the workplace (Agolla & Ongori, 2007). Working in a place where everyone is treated equally ensures that organizations make the most out of the diversity of the workforce, which might assist the organization to be more efficient and effective. Giving a unique definition of diversity seems almost impossible, since every scholar in the field has defined the concept according to their own perspective. Several have looked at it from a *narrow perspective*, whereas others from a *broad view*. The first standpoint argues that diversity is related and restricted to specific cultural categories such as race and gender (i.e. Cross, Katz, Miller & Seashore, 1994) while others claim that diversity based on race, ethnicity and gender cannot be understood in the same way as diversity based on organizational functions, abilities and cognitive orientations (Nkomo, 1995). The main issues that arise from diversity are those related to discrimination and exclusion of cultural groups from traditional organization: if diversity is a concept that is inclusive to all individuals, it will become very difficult to identify discrimination practices (Cross et al., 1994). The biggest limitation in the narrow definition is that it may imply that all differences among people are the same. Thus, it may be concluded that diversity is "nothing more than a benign, meaningless concept" (Nkomo, 1995). Scholars who embrace a broad definition (i.e. Jackson, May & Whitney, 1995) argue that diversity refers to all the possible ways people can differ: from demographic categories as well as they have different values, abilities, organizational functions and personalities. For example, Cox (2001) defined diversity as the variation of social and cultural identities among people existing together in a defined employment; others argue that diversity is the degree of heterogeneity among team members on specific demographic dimensions (Williams & O'Reilly, 1998). Moreover, Thomas and Ely (1996) described diversity as the varied perspectives and approaches to work, brought by individuals of different identity groups. It can be concluded that in order to understand the dynamics of a heterogeneous workforce, the interactive effects of multi-dimensional diversity have to be addressed.

2.2 Workgroup Diversity and Organizational Outcomes

In the past 40 years, researches on the effects of diversity on group process and team performance have been conducted in many fields such as sociology, psychology and economy. As a result, diversity has increasingly become a “hot-button” issue in a variety of areas, ranging from politics to corporate strategies. Despite the increasing awareness on the topic, the organizational attitudes towards a diversity workforce range from intolerance to tolerance and even appreciation of diversity, leading very mixed results from researchers (Joplin & Daus, 1997). A systematic review of Williams and O’Reilly (1998) found out that some scholars support the idea that diversity is beneficial for the performance and can lead to better results such as improved innovation and creativity (Cox, Lobel and McLeod, 1991), organizational commitment, job satisfaction, and an increased access to a more diversified client base (Cox, 1993; Thomas & Ely, 1996). Moreover, diversity in the workplace can represent a competitive advantage since different viewpoint can facilitate unique and creative approaches to problem-solving, which consequently leads to better organizational performance (Allen, Dawson, Wheatley, White 2004). On the other hand, others argued that diversity is disruptive for group processes and performance (e.g., Brewer, 1979; Guzzo and Dickson, 1996). In reviewing the literature, Milliken and Martins (1996) defined diversity as a “double-edged sword, increasing the opportunity for creativity as well as the likelihood that group members will be dissatisfied and fail to identify with the group”. Such discrepancies in literature have not only resulted in a more nuanced understanding of diversity, but they have also led diversity to become a “business case”, raising the question of whether such diversity in the workplace will lead to better outcomes both on individual and organizational level. Managing diversity is crucial and it requires a “fair working environment” where all employees are treated equally among each other and no group is in a position of advantage or disadvantage. Thus, because diversity holds all group of employees at all levels in the company, “the challenge of diversity is not simply to have it, but to create conditions in which its potential to be a performance barrier is minimized and its potential to enhance performance is maximized” (Cox, 2001). Therefore, diversity requires an organizational culture where all members within the organization can be themselves without being inhibited by gender, age, nationality or other factors that are irrelevant for the performance (Cox, 2001).

2.3 Business Case and Social Justice Case

At this point, managing diversity inside organizations can be considered as the organizational response to increasing internal and external diversity given as a result of demographic, social and structural changes (Agoos & Burr, 1996). The more significant issue is how to deal with and include the diversity we have today (O'Leary & Weathington, 2006). In answering why organizations should introduce Diversity Management Practices in their business strategy, scholars have traditionally referred to two arguments: the social justice theory and the business case theory. Supporters of the social justice case argue that it is a matter of fairness and justice, better known as equity theory (Pritchard, 1969). This theory focuses on how employees evaluate and respond to a perceived imbalance in justice: employees expect that their work outcomes will be commiserate with their work inputs when compared to the inputs and outcomes of their referent others. Social justice is composed by various components that interact among each other's and create individual impression's of the organizational climate for justice. These impressions drive many of the organizationally relevant outcomes that are the foundations of the business case theory for diversity. As a consequence, it can be stated that the business case for diversity derives in part from the existence of a climate of justice within an organization (O'Leary & Weathington, 2006).

Following the traditional business case logic, diversity, when properly managed, can lead to cost savings, talented workforce, and business prosperity (Robinson & Dechant, 1997). In a profit mindset, the business case for diversity seems to be more appealing compared to the social justice case because it supports the idea that diversity management has a positive impact on the firm's competitive advantage and performance. For instance, exponents of the "value in diversity theory" (i.e. Cox, 1993) affirm that racial diversity lead to think upon a variety of perspectives, due to different experiences of different demographic groups that can be included in many decision-making processes and problem-solving circumstances. As a result, they suggest that homogeneous groups are less likely to register high-quality performances because maintaining and exploiting a workforce promotes and increases the pool of knowledge, skills and abilities upon which organizations can take advantage (Foeman & Pressley, 1987). In a study conducted by McKinsey Company (2015), it was found out that companies in the top quartile for gender, racial and ethnic diversity in performing leadership roles, are more likely to have financial returns above the national industry average (Noon, 2017). Moreover, the business case considers crucial for an organization to understand and represent the communities it serves, in order to gain a larger pool of customers as well as to avoid the community's alienation. This issue cannot be overcome by merely hiring a more diverse

workforce, but it is necessary to adequately represent various groups, in order to avoid the assumption that minorities are being hired only to comply with legal requirements (O’Leary & Weathington, 2006). Diversity must be present at all levels of the organization (Foeman & Pressley, 1987). Even though proponents of the business case might see the increasing diversity as an opportunity to gain valuable cultural intelligence and attract more different costumers base, the business case approach to promote diversity is harshly limited. The conflicting results in the literature (William & O’Reilly, 1998) suggest that the benefits of diversity, from which the business case has its roots, may not materialize or are not quantifiable. Therefore, this approach can lead to marginalization of minority employees to represent “their” group to appeal to others of “their kind” (Ely & Thomas, 2001).

2.4 Diversity characteristics and organizational outcomes: Empirical findings

As mentioned earlier, there have been several sociopsychological theories explaining the dynamics of diversity in groups and organizations. There are many dimensions of diversity, mainly distinguished for their readily or non-readily characteristics. In order to have a better understanding of the dimensions studied in this paper, we are going to briefly explain the 4 diversity traits we have decided to explore, by outlining relevant results found in previous studies. More in detail, our main purpose is to provide a framework for exploring why has become crucial to understand those dimensions within an organizational context, and what academic explanations have been proposed so far. It has been widely explained how examining the relationship between diversity and organizational outcomes has yielded to inconsistent results yet. As presented in the following paragraphs, studying the relationship between diversity treated as age, nationality, educational background and sexual orientation produces mixed, or even contradictory results.

Age. The evolution of the health care system and better living conditions have raised the number of seniors staying active, which resulted in an increase of the workers’ age. With life becoming longer and retirement age being incessantly postponed, many generations share the workplace, creating issues regarding diversity management, communication and knowledge sharing (Mapelli, 2016 in diversitymanagement.it). Helping business fight skill shortage, sustaining economic growth and contributing to meet the costs of the ageing people are the most important goals for the older workforce. Therefore, age diversity management must react to this process of demographical change, which has become an economic and social problem. Since the peculiarity of this dimension is that everyone would be considered into the “age

diversity category”, organizations might face cases of multiple discrimination or intersectionality (Riach, 2009). Previous research on age diversity and organizational outcomes have consistently found out a curvilinear relationship: employees at the younger stage experience more positive outcome while older tend to experience more negative outcomes performances (Barak, Lizano, Kim, Duan, Rheem, Hsiao & Brimhall, 2016). Ageing employees are associated lower ability, motivation, and productivity compared to younger workers, and they are believed to be harder to train, less adaptable and more resistant to change (Posthuma & Campion, 2009). Furthermore, previous findings shed light on the nonlinear relationship between age and organizational outcomes. A study conducted in the United States about nurses, who were younger than 40 or older than 60, reported high intentions to leave (Zhang, Punnett, Gore & CPH-New Research Team, 2014). On the other hand, other studies supported the existence of a curvilinear relationship between age and organizational outcomes. Results suggested that younger workers were more prone to be affected by workplace stressors and burnout (Boyas & Wind, 2010; Gellert & Schalk, 2012), low satisfaction with their jobs (Abu-Bader, 2005; Gellert & Schalk, 2012) and less likely to leave their job (Blankertz & Robinson, 1997). In our research, the focus will be on analyzing how beliefs about age diversity moderate the relationship between workgroup diversity and the elaboration of task-relevant information, which in turn is predicted to influence performance and creativity.

Nationality. Another surface-level diversity dimension that we have considered in our data collection (but not discussed) is nationality. Historically the growing immigration has had a deep impact on the political, social and economic aspects worldwide. Nowadays, migrations play a crucial role on the world economy and job market, with globalization continuing to dominate every aspect of social life. A 2014 Pew Report found out that 17.1% of the total U.S. workforce was composed by immigrants, of which 12.1% were legal workers and 5% were undocumented workers (Rold, 2017 in diplomaticcourier.com). In reviewing the literature, it can be noticed that study findings on the effects of nationality or immigration status on organizational outcomes are contradictory (Barak et al., 2016). In a study conducted by Glazer & De la Rosa (2008), a sample of 506 nurses working in Israeli hospitals was analyzed, and it was found out that nurses born in Israel were less committed to their organization compared to their foreign-born counterparts. Controversially, Abu-Bader (2005) examined the intersection between gender and ethnicity and its effect on job satisfaction. Results show that the minority social group in Israel composed by Arabic social workers, reported significantly lower rate of personal and organizational outcomes (Abu-Bade, 2005).

Educational background. Educational background refers to the academic credentials or degrees obtained by an individual (Ng & Feldman, 2009). Previous studies on the relationship between education and organizational outcomes have been mixed, with evidence indicating a generally negative relationship. However, there were some exceptions where higher education led to greater job satisfaction and an increased likelihood to stay in the company (Barak et al., 2016).

Sexual orientation. This deep-level dimension of diversity is for many “the last acceptable and remaining prejudice”, since research on this topic has received less attention compared to other dimensions such as race or gender diversity (Ozeren, 2014; Ng & Rumens, 2017). Despite the misgivings, the business case for diversity previously discussed, has been mobilized as an incentive for employees to foster LGBT workforce diversity. (Ng & Rumens, 2017). However, empirical research examining a link between LGBT workforce and multiple organizational outcomes is limited (Badgett, Durso, Mallory & Kastanis, 2013). This dimension of diversity includes a variety of identities as well as many intra-group differences. The issue about sexual diversity for Human Resource Management is that if compared to other dimensions, it can be hidden. In the U.S., 3.8% of the whole population identifies itself as LGBT (Ng & Rumens, 2017) and the ratio of LGBT employees to the whole workforce is estimated in a range between 3% and 12% (Ozeren, 2014). However, these numbers cannot be considered reliable indicators, since a discrete part of LGBT people decide not to come out, above all in the workplace where they could become victims of homophobia, harassment and discrimination (Ng & Rumens, 2017; Ozeren, 2014). Recognizing and protecting diversity in terms of sexual orientation has become a “social and economic imperative” (King & Cortina, 2010). In fact, considering Fortune 500 companies, 93% of those companies include sexual orientation supportive policies and 75% include gender identity in their non-discrimination policies (Human Rights Campaign, 2016). Despite anti-discrimination protections being set up by many organizations worldwide, LGBT people still report high levels of discrimination in employment, and workplace bullying and harassment. Exclusion and discrimination that could arise from diversity beliefs against LGBT employees contribute to negative outcomes both at individual and team level (Irwin, 1999). Due to the limited length of our research, we will not explore how sexual orientation is managed by organizations. Instead, we will focus on its direct or indirect effect on business outcomes.

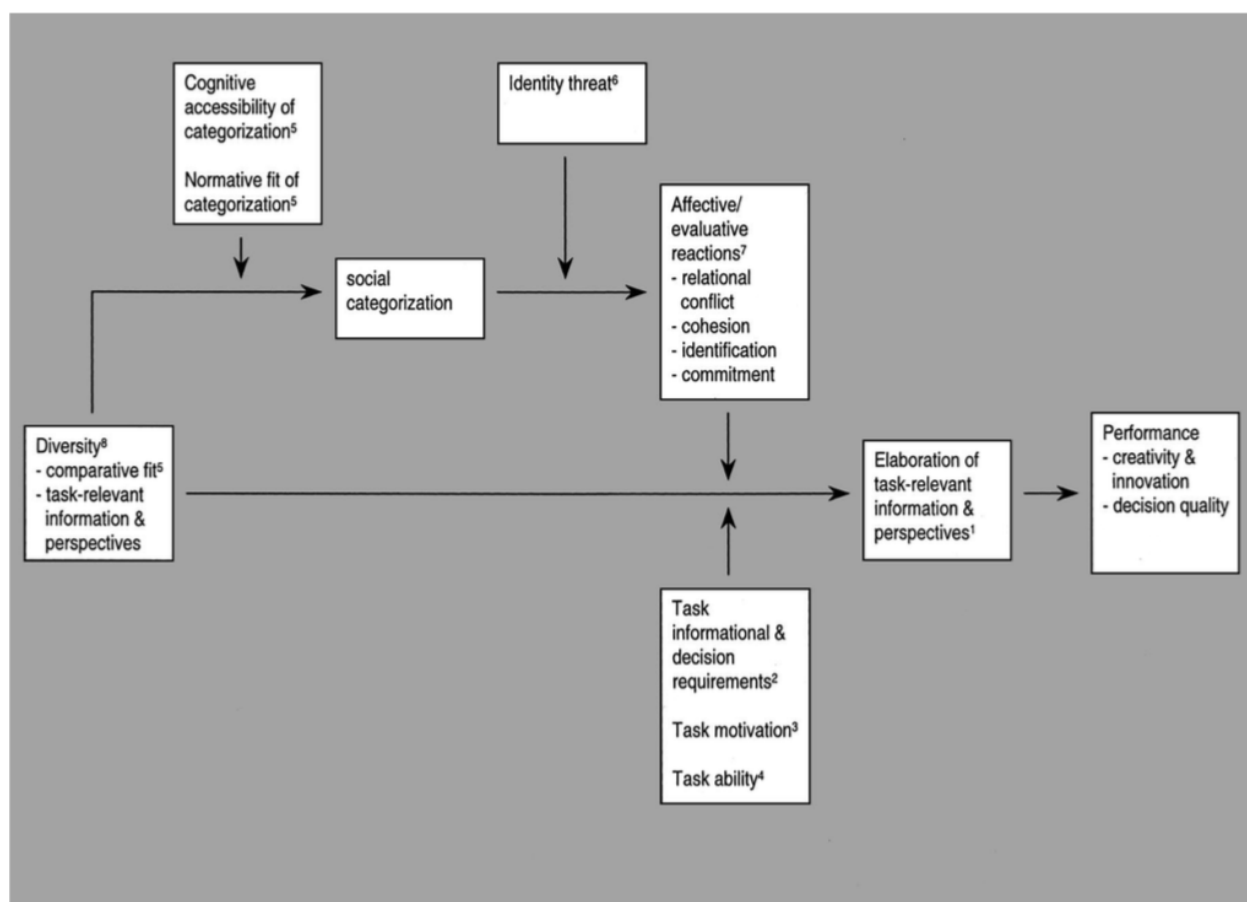
2.5 How Diversity influences Team Outcomes: Theoretical proposals

Scholars in the field of HRM have commonly studied diversity based on either information-processing perspective/decision-making theory or social categorization theory (Tajfel, 1981). These theories underlined different and sometimes contradictory hypotheses regarding the effects of diversity on group process and performance. On the one hand, the information-processing theory is proposed to bring about positive effects of diversity attributes on team performance due to a better elaboration of task-relevant information that occurs when a team can draw from a more diverse pool of resources of its members (Williams & O'Reilly, 1998).

This, in turn, is expected to lead to more creativity and increased performance. These differences that the theory takes into consideration are not readily detectable, underlying attributes that are more job-related, such as educational background, experience and knowledge (Schneid, Isidor, Li & Kabst, 2015). On the other hand, the negative effects of workgroup diversity are more evident in the social-categorization theory. In fact, it refers to the group members' cognitive differentiation between themselves ("us") and other members ("them") due to the perceived differences on a certain readily attribute (Williams & O'Reilly, 1998). Related to this, research on self-categorization theory shows that out-group members evoke more disliking, distrust, and competition compared to in-group members (Hogg & Terry, 2000). As a consequence, in terms of homogeneous groups, members of diverse work-groups display less attachment to each other, show less commitment to their respective organizations (Harrison, Price & Bell, 1998), less communication within the team, higher job absence (Tsui, Egan & O'Reilly, 1992), and experience more conflict when decisions must be taken (Hambrick, Cho & Chen, 1996). This empirical evidence is supported by the fact that biases against out-group members seem to reveal automatically: if the perception of categorization is salient (race, sex, nationality, etc.), it inevitably triggers a corresponding categorization (Fiske & Neuberg, 1990). Having different perspectives can lead to "intra-group task conflicts", which means that there is greater possibility that individual exchanges will occur with dissimilar others. Ancona and Caldwell, (1992) noted that for tasks that typically demand experience and knowledge obtained through exposure to functional areas (known as "cognitive tasks"), factors such as functional background and organizational tenure are very important. In contrast, age, gender and race are low in job-relatedness. These empirical results are too inconsistent to consider diversity types as an explanation about the effects of group diversity and group performance: the controversy whether or not there is a positive relationship between workplace diversity and organization performance that has not been resolved yet (Van Knippenberg & Schippers, 2007).

In order to understand and explain the aforementioned findings, the categorization-elaboration model (CEM) looked further than the type of diversity and examined the processes that transcend these types and determined the effectiveness of group diversity. By reconsidering the nature of these processes, the authors proposed that each dimension of diversity may in principle elicit both information/decision-making and social categorization processes (Van Knippenberg, De Dreu & Homan, 2004).

Fig. 2.1: categorization-elaboration model (CEM) of work group diversity and group performance.



With the aim to understand workgroup diversity and its relationship with team performance in consultancy firms, this project focuses on identifying which factors moderate and mediate the relationship and their influence in terms of team outcomes. More in detail, the focus is on the role of the psychological safety and diversity beliefs as moderators, and the elaboration of task-relevant information as mediator. Diversity in terms of Sexual Orientation and Age have been considered as “diversity in team”.

Elaboration of task-relevant information

More in detail, the model suggests that diversity within team does not automatically create subgroups, but it can increase the performance by the elaboration of task-relevant information. The latter concept is defined as member's exchange, discussion, and integration of ideas, knowledge, and insights relevant to the group's performance. This, in turn, is predicted to be related with team performance (van Knippenberg et al., 2004). Indeed, structural changes in organization have contributed to the growing importance of informational diversity in teams.

As a consequence, many organizations started to rely on teams that are diverse with respect to several diversity dimensions (Kozlowski & Bell, 2013). In order to explore the effects of relevant information elaboration as mediator, Kooij-de Bode, Van Knippenberg & Van Ginkel (2008) carried out a study taking as a sample homogeneous as well as ethnically diverse groups that had to perform a decision-making task. Workgroups were asked to perform this task by proposing creative solutions. Moreover, some groups received instructions that emphasized the importance of integration and exchange of information, while others did not receive any kind of instruction. Results pointed out that, compared to homogeneous groups, ethnically diverse groups performed better after having received the instructions rather than when there were no instructions. Furthermore, results showed that interaction among diversity, instructions and exchanging of information was mediated by the elaboration of task-relevant information (Kooij-de Bode et al., 2008). The Categorization-Elaboration Model claims that the inconsistent results related to the effectiveness of diverse groups can be explained by the constraining role of social categorization: the process of elaboration of task-relevant information may be disrupted by people's tendency to categorize and evaluate other team members as in-group or out-group members and therefore, disabling proper elaboration of information (Van Knippenberg et al., 2004). A study conducted by Meyer, Shemla & Schermuly (2011) examined the interaction between social categorization and elaboration of task-relevant information: findings showed that groups with strong faultlines – defined as the extent to which the differences between subgroups are clearer than differences within subgroups (Homan, Van Knippenberg, Van Kleef, De Dreu, 2007) – performed better compared to groups with weak faultlines, only when social categorization was not salient. Moreover, they found that the elaboration of task-relevant information mediated the relationship between faultlines and performance. In fact, groups with strong faultlines showed more information elaboration, leading to a better performance (Meyer et al., 2011).

To summarize, if the social categorization is salient, diversity is proposed to have detrimental effects on the process of the elaboration of information due to the fact that

categorization may engender intergroup biases which result in a “closing of the mind” to perspectives from diverse others (Kooij-De Bode et al., 2008). The categorization-elaboration model proposes that to fully understand whether diversity is beneficial or detrimental for team outcomes, academics should focus on mediators and moderators and explore new aspects of diversity (Hentshel et al., 2013).

Throughout the reconceptualization of the categorization-elaboration model, we propose that the relationship between team diversity and team outcomes measured as team performance and creativity is mediated by the elaboration of task-relevant information.

***Hypothesis 1:** the elaboration of task-relevant information & perspectives mediates the relationship between workgroup diversity – sexual orientation (1a) and age (1b) - and Team Outcomes measured by team performance (Hp. 1c) and creativity (Hp. 1d)*

At this point, it is necessary to underline that workgroup diversity will not always lead to the elaboration of task-relevant information. Thus, we propose 2 factors that moderate this relation.

Diversity beliefs

The present study focuses on diversity beliefs as a moderator of the relationship between workgroup diversity and the elaboration of task-relevant information, which may thus also be considered as a confirmation approach when examining diversity effects. By measuring what is known as “perceived diversity” in terms of age and sexual orientation, the study aims to examine to what extent the perception of differences in diversity can affect team outcomes. Studying real-life teams allowed us to capitalize on existing differences in objective diversity and diversity beliefs within workgroups. We investigate diversity beliefs defined as “beliefs individuals embrace about how group composition affects workgroup diversity” (Van Knippenberg & Schippers, 2007). Previous research showed that diversity effects depend on the perception of group members about their own group’s composition. However, what determinates how diversity is perceived is still unclear (Homan, Greer, Jehn & Koning, 2010). In fact, most of the studies conducted so far have examined objective diversity, while just fewer focused on the diversity perceptions held by members of a team. As already mentioned, diversity is an integral part of teamwork in today’s world (Meyer & Schermuly, 2012).

Diversity beliefs can be defined as the extent to which individuals believe there is value of diversity (or similarity) in their group functioning – the more people believe in the positive value of diversity, the more favorably they respond to their group’s diversity (Ely & Thomas, 2001; Van Dick, Van Knippenberg, Hägele, Guillaume, Brodbeck 2008). Diversity beliefs can also be related to personality characteristics, for example tolerance for ambiguity or need for recognition (Kearney & Gebert, 2009). Workgroups within organizations can be composed by members who differ in educational background, sex and age. Even though it has been demonstrated that social interaction is strongly influenced by diversity, the nature of its influence is imperfectly understood (Van Knippenberg & Schippers, 2007). Some authors suggested that the key to fully understand the effects of diversity is to identify the way in which people construe diversity. The latter, in fact, refers to differences between individuals on any attribute that leads to the perception that someone is different from oneself (Homan et al., 2010).

Previous investigations on the topic have typically examined the effects of diversity by using only the objective composition of the group as a predictor: group members are assumed to base their perception of the group on the objective group composition, such as in a group composed by two white females and two black men. As a consequence, group members could perceive their group to consist of two subgroups along gender and age lines. Those social categorizations are contingent on their comparative fit. Comparative fit is defined as the extent to which observed similarities and differences between people, or their actions are perceived as correlated with a division into social categories (Turner, Hogg, Oakes, Reicher, & Wetherell; 1987). Comparative fit between subgroups is high, if a subgroup exhibits high intra-group similarity and high inter-group dissimilarity (Meyer et al., 2012). Subgroups are not only detrimental for team processes and outcomes, but it has been shown that when they are salient, group functioning suffers because of intergroup bias created by “us versus them” distinctions (Brewer & Brown, 1998; van Knippenberg, & De Dreu, 2007). On the other hand, when members perceive each other as distinct individuals, groups demonstrated to be better able to take advantage of the benefits of diversity, making the working environment stimulating (Brewer & Brown, 1998; Van Dick et al., 2008). In a study conducted by Homan, Hollenbeck, Humphrey, Knippenberg, Ilgen & Van Kleef (2008) a distinction was made between “subgroup perceptions” and “individual difference perceptions”, since scholars tend to associate subgroup perceptions with negative diversity effects, whereas individual difference perceptions are associated with positive diversity effects. Using “openness to experience” as a predictor, results

showed that it not only slows the potential negative effects of working led by working in different workgroups, but it also increases the perceptions of individual differences within the group, which are a prerequisite of the positive effects of diversity in teams (Homan et al., 2008).

However, the aforementioned study did not examine the effects of diversity beliefs for diverse group in particular, which is considered a crucial aspect by the CEM. As previously mentioned, the CEM bases its theory on the fact that all forms of diversity can lead to positive or negative results and it proposes conditions governing the direction of diversity effects (Meyer & Schermuly, 2012). Additionally, the model assumes that the effects of diversity faultlines – defined as the unfavorable social categorizations within the group that led to a decreased team performance – can be contained if group members hold pro-diversity beliefs.

The benefits provided by holding pro-diversity beliefs have been widely validated, showing a higher group identification for group members who perceived their group as diverse and hold pro-diversity beliefs compared to colleagues who hold pro-similarity beliefs (Stegmann & van Dick, 2009; Van Knippenberg et al., 2007). In order to evaluate the moderating role of diversity beliefs on the relationship between workgroup diversity and group performance, Homan et al., (2007) carried out a study considering both diversity beliefs and the elaboration of task-relevant information: groups were asked to perform a creative idea-generating task. Group members received either all the same information (homogeneous), or different information per person (heterogeneous) and they were instructed that diversity could increase or diminish the performance. Information elaboration and group performance were assessed by an objective coding scheme. Findings showed that diversity beliefs moderated the relationship between group diversity and group performance: diverse groups holding pro-diversity beliefs performed better than when they had holding pro-similarity beliefs, compared to homogeneous groups. Furthermore, results indicated that the moderating role of diversity beliefs was mediated by the elaboration of task-relevant information: diverse groups with positive diversity beliefs showed higher level in elaborating information and, as a consequence, performed better compared to homogeneous groups. Homan et al. (2008) pointed out that teams that are more open to diversity, make better use of their diversity because they perceive it more in terms of individual differences than in terms of subgroups. This theory is based on the self-categorization theory which suggests that it is not the difference per se but rather the belief that a difference is meaningful within the group that leads diversity to affect categorization processes. For example, when considering some jobs, such as truck driving or working in mines, they seem to be more strongly associated with stereotypic beliefs about gender differences than other (Van Knippenberg et al., 2004). Moreover, it has been exposed the

theory that diversity is more valuable for more complex, knowledge-intensive tasks than for simpler, routine tasks (Van Knippenberg & Schippers, 2007). This reasoning has been confirmed by Homan et al. (2010): diversity beliefs have a lesser impact on subgroups perceptions versus individual differences in performing physical tasks rather than intellectual tasks (Homan et al., 2010). Thus, we suggest that at high level of perceived beliefs with team members holding pro-diversity beliefs, the relationship between workgroup diversity and the elaboration of task-relevant information is stronger.

***Hypothesis 2:** the relationship between sexual orientation diversity (2a) and age diversity (2b) and the elaboration of task-relevant information is **moderated** by pro-diversity beliefs. Specifically, the relationship will be stronger at higher levels of pro-diversity beliefs.*

Psychological Safety

Nowadays, organizations require their employees to participate in the continuous improvement of organizational processes and practices by embracing behaviors that enable learning to occur.

These behaviors include collaborating with other members of the organizations and experimenting different ways of doing tasks (Edmondson, 1999). Although these activities help to face and overcome new challenges, they may also represent a risk such that individuals do not contribute to learning process and therefore obstruct individual as well as organizational learning (Detert & Burris, 2007). Edmondson proposed a solution to overcome such threats by establishing a psychologically safe work environment in which employees feel safe to voice ideas, willingly seek feedback, collaborate and take risks (Edmondson, 1999). In literature, several definitions of psychological safety has been proposed and, in our study, we will consider the dominant definition proposed by Edmondson (1999): “in a psychological safe work environment, employees feel that their colleagues will not reject people for being themselves or saying what they think, respect each other’s competence [...] have positive intentions to one another and feel free that it is safe to experiment and take risks”. This, in turn, influence a range of workplace outcomes at individual, team and organization level (Edmondson & Lei, 2014). A systematic literature review from Newman, Donohue and Eva (2017) has examined the antecedents of psychological safety at different levels of analysis, predominantly treating psychological safety as a mediator. For instance, at the team level, employees’ collective perceptions on supportive leadership behaviors were found to foster team outcomes such as team performance (Li & Tan, 2013; Schaubroeck, Lam & Peng, 2011).

Other researchers have focused on indirect effects such that psychological behavior has

been found to influence performance indirectly through facilitating learning behavior at both individual and team level (Brueller and Carmeli, 2011). Additionally, literature argued that there is a link between employee perceptions of psychological climate and their creativity. According to Kessel, Kratzer and Schultz (2012), team psychological safety is positively related to creative team performance. The perspectives of Edmondson and colleagues are based on the fact that psychological safety refers to team member's perception of the consequences of taking interpersonal risk, being able to reduce team members' learning-anxiety that could rise (Edmondson, 1999). Although the literature is dominated by the perspective that team psychological safety results in distinct effects such as higher levels of cooperation and superior levels of performance. A growing body of research has examined the moderating role of psychological safety. In fact, in analyzing the relationship between expertise diversity and team performance, it was found that when psychological safety was low, expertise diversity had a stronger negative relationship with team performance (Martins, Schilpzand, Kirkman, Ivanaj and Ivanaj, 2013). Furthermore, Kirkman, Cordery, Mathieu, Rosen and Kukenberger (2013) discovered that for teams with higher psychological safety, the relationship between nationality diversity and performance was higher, compared to teams with low psychological safety.

This study proposes a different model of how psychological safety might play a moderator role in influencing the elaboration of task-relevant information process at team-level and further the relationship between diversity and team performance. Consequently, psychological safety instead of directly leading to team performance, could influence the extent to which workgroup diversity boost the elaboration of task-relevant information. When there is a high level of psychological safety, members feel safe to give voice to their ideas and free to share what they are in terms of nationality, age, educational background or sexual orientation, leading to a higher elaboration of task-relevant information and thus, a better team performance.

***Hypothesis 3:** the relationship between sexual orientation diversity (3a) and age diversity (3b) and the elaboration of task-relevant information is **moderated** by the psychological safety. Specifically, the relationship will be stronger at higher levels of psychological safety.*

Finally, the study focuses on the moderated mediation role as explained by Edwards and Lambert's (2007) first stage moderation model. Thus, we expect psychological safety climate

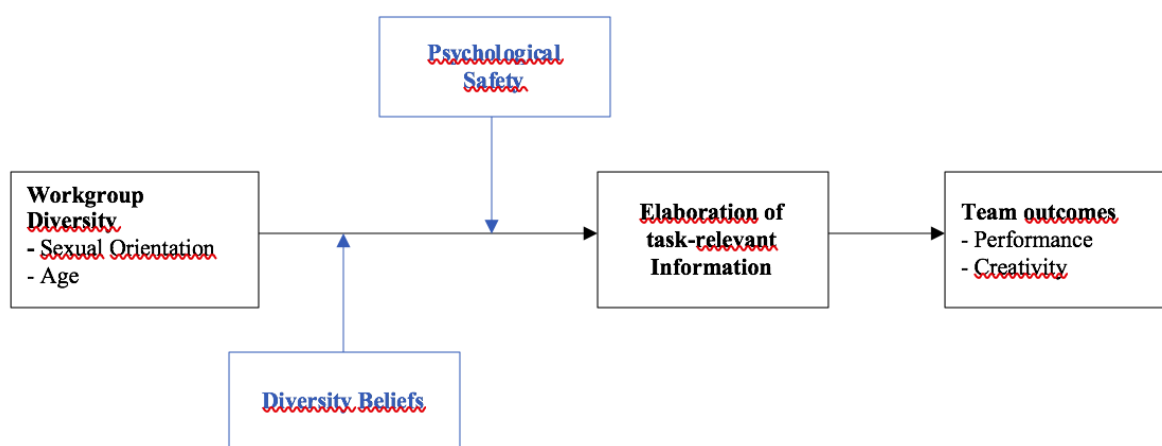
and pro-diversity beliefs to act as moderators (Z' – Z'') between the independent variable (X) workgroup diversity and the mediator (M) elaboration of task-relevant information, which in turn predicts certain outcomes variables (Y) measured as team performance and creativity.

Hypothesis 4: *the mediated relationship will be moderated by pro-diversity beliefs (a) and psychological safety (b). Specifically, we expect that the relationship between workgroup diversity and the elaboration of task-relevant information & perspectives will be stronger for teams with higher level of pro-diversity beliefs and psychological safety.*

According to this purpose, the relationship between workgroup diversity and team outcomes (and elaboration of task-relevant information) can range from very positive to negative depending on how much individuals hold pro-diversity beliefs (a) as well as on the level of psychological safety (b) within the team.

The study is based on a reconceptualization of the categorization-elaboration model proposed by Van Knippenberg et al. (2004) as showed in Fig. 2.

Fig. 2.2 reconceptualization of CEM to examine the relationship between Workgroup Diversity and Team Outcomes



3. METHODOLOGY

In order to test our hypotheses, we have conducted a quantitative cross-sectional analysis using SPSS.

To obtain the largest possible dataset, the present study uses data gathered by a group of researchers from several masters at ISCTE – Instituto Universitário de Lisboa

3.1 Sample

It is crucial to know who to sample and, in this study, the selection of participants has been a critical factor for the accessibility of the participants, since they might have preferred to not provide information about their diversity beliefs preferences. The unit of analysis in this research is team within consultancy organizations; the unit of observation is individuals within teams. The individuals taking part in the experiment are both employees and leaders working in teams of different consultancy companies, some based in Portugal while others based in Italy. The sample was collected together with the 2019 and 2020 members of the *ConsulTeam Project*. Only teams consisting of people working interdependently in consultancy firms have been included in this study and team members needed to acknowledge that they were part of the same team. The total dataset consists of 45 teams represented by 210 participants. From the total number of participants, 164 were team members and 45 were leaders. The mean of the team dimension is 8,10 members per team ($SD = 5,26$), ranging from 2 to 32. However, most of the teams included consisted of 2 to 6 members (51,21%), while the remaining consisted of 6 to 15 members (40,85%) and just 13 teams consisted of more than 15 members (7,92%). Regarding the team respondents, 51,21% were male and the participants' average age is 28,23 ($SD = 5,46$) ranging from 20 to 55. In terms of seniority, the average team tenure is 1,87 ($SD = 0,97$), ranging from 1 to 5.

Regarding the leader sample, the male population represents 31,11% and the average age of the respondents is 35,3 ($SD = 7,89$). In terms of seniority, on average the leader has been working in the company for 3 years, ranging from 0 to 5. More in detail, 64,4% has been working in the company for less than 3 years.

3.2 Procedure

With the aim to collect reliable data, two different questionnaires were developed during the research. The first questionnaire was distributed to team members, while the target of second questionnaire were leaders. The reason behind the decision of developing two questionnaires rises from the need of measuring different variables for the two roles (team member and team leader) in order to have different perspectives on how diversity can be perceived by participants. Team members were asked to fill in a questionnaire structured in 17 questions and containing an average of 7 items to rate from a seven-point Likert scale, while Managers were asked to answer to a questionnaire of 2 questions consisting of 8 items to rate from a seven-point Likert scale (1 – totally disagree; 7 – totally agree).

Additionally, at the end of each questionnaire there was a section related to sociodemographic data of the participants, questioning about age, job function, seniority level and number of members in the team. For practical and exceptional circumstances, 100% of the questionnaires were sent and answered online. In fact, the emergency of Covid-19 did not allow researchers to deliver any of the questionnaire physically. Moreover, the restrictive measures adopted during the emergency slowed down the data collection process, requiring researchers more effort to obtain the right number of participants to conduct the study. Team members and leaders were asked to answer the questionnaires out of the work environment; participation was voluntary and anonymous. In order to guarantee the confidentiality and minimize the risk of violating any participants' privacy, we will use coded numbers for the duration of the study, attributing a different number to each team, member and leader.

3.3 Measures

Throughout the two questionnaires, the variables that have been measured are related to diversity in teams, diversity beliefs, the elaboration of task-relevant information, psychological safety and team performance (measured as team performance and creativity). Since I have collected data together with my research colleagues, only 5 questions out of 17 from the team questionnaire were used.

Diversity in Team

Diversity is measured according to four dimensions, namely nationality, age, sexual orientation and educational background. Four questions were used to assess diversity in team: participants were asked to rate on a percentage scale the extent to which their teams are heterogeneous in relation to each of the dimension, ranging from very heterogeneous (0%) to very homogeneous

(100%). For practical reasons as well as length limits, this study consider only two dimensions in the analysis, namely age and sexual orientation diversity. According to Van Knippenberg and Schippers (2007) “differences between group members are reflected in indices of the extent to which group members differ from each other, such as the standard deviation (Van Knippenberg & Schippers, 2007: 522).

Therefore, to take into consideration the group dimension as level of our analysis, standard deviation (*SD*) was computed. Technically, standard deviation measures the spread of a data distribution. The more spread out a data distribution is, the greater its standard deviation is (in khanacademy.org).

Regarding Age diversity – which is a continue variable - the mean for the member sample is 43.57 (*SD* = 25.85), meaning that age is quite homogeneous. Regarding Sexual Orientation, the mean is 44.90 (*SD* = 27.42), meaning that on average the leader sample is not homogeneous neither heterogeneous, but it points out a good balance between the orientation.

In order to check the reliability of the scale, we used a common measure of internal consistency known as “Cronbach’s Alpha”. The reliability ($\alpha= 0.75$) of the scale is good.

Diversity Beliefs

To assess diversity beliefs, we used 4 items based on a research by Van Dick et al (2008). Participants were asked to rate on a seven-point Likert scale, whereby one refers to “totally disagree” and seven to “totally agree”, the extent to which they believe in valuing diversity and its influence in terms of team outcomes. An example question regarding diversity beliefs is “I believe that team members’ diversity is a key aspect to increase performance” and “belonging to a heterogeneous team can be the recipe for success”. In measuring diversity beliefs, it was necessary to recode two reverse variables that were negatively coded: lower values indicated higher agreement or more positive sentiments. The reason behind this logic is that, especially when reporting means over variables, positive coding is more intuitive. According to Van Dick et al. (2008), higher rating scale for diversity beliefs reflect pro-diversity beliefs among members while lower ratings indicate rather pro-similarity beliefs. The internal consistency was calculated and the reliability ($\alpha= 0.66$) of the scale is good.

Elaboration of task-relevant information

The elaboration of task-relevant information was measured by using 3 items adopted by Homan et al. (2008). Participants were asked to think about how team members work with each other and rate the answer on a seven-point Likert scale from totally disagree (1) to totally agree (7).

An example of item to rate is “group members contributed to a lot of information during the group task”. Results showed that Cronbach’s Alpha regarding the elaboration of task-relevant information is 0.611. However, if we decide to delete an item, results show that Cronbach’s Alpha would decrease. Thus, none of the items were deleted in the analysis.

Psychological Safety

To assess psychological safety, we adopted a scale by Edmondson et al. (2014) using 5 items. As in the case of diversity beliefs, when carrying out the analysis, it was necessary to reverse 3 variables and give them a positive meaning. Participants were asked to think about a project in which their team is involved, and the way team members work with each other. They had to rate on a seven-point Likert scale to what extent they agree (7 – totally agree) or disagree (1 – totally disagree) with each of the statement. Some examples of psychological safety items are “if you make a mistake in this team, it is often held against you” or “no one in this team would deliberately act in a way that undermines my efforts”. The internal consistency was calculated and the reliability ($\alpha = 0.57$) of the scale is good.

Team Performance

The variable team performance was measured through 2 dimensions: team performance and team creativity. Using a scale adopted by González-Romá, Fortes-Ferreira & Peiro (2009), participants were asked to think about the outcomes of their team’s work and rate on a seven-point Likert scale to what extent they agreed with each of the statements (7 – totally agree and 1 – totally disagree) Examples of statements are “my team has a good performance” or “my team believes that we are able to produce new ideas or solutions”). This variable was both in the member and leader questionnaire in order to ensure the objectivity of the measurements. The reliability ($\alpha = 0.87$) of the scale is good.

4. DATA ANALYSIS

4.1 Data aggregation

To test my hypotheses individual scores were aggregated to a group level. In order to understand whether such aggregation is justified, I calculated the interrater agreement $r_{wg(J)}$. These indices are related to multilevel modeling, such as there are variables measured at different levels of analysis (e.g., individuals, work groups, different organizations) that affect dependent variables, typically measured at the lowest level of analysis (e.g., individuals). Depending on the theoretical nature of the aggregated construct, it may be necessary to

demonstrate that the gathered data at the lower level of analysis (individual-level perceptions) are similar enough to one another prior to aggregate those data as an indicator of a higher-level construct (e.g., shared climate perceptions within teams) (Lebreton & Senter, 2008). According to the literature, $r_{wg(J)}$ between 0.70 and 0.90 are considered strong agreement within a group; values above 0.90 to 1.00 are considered as very strong agreement. With regards to diversity in team, namely age diversity and sexual orientation diversity, $r_{wg(J)}$ was not calculated since the scale is expressed in percentage. Therefore, for these two variables we have computed the mean and standard deviation already mentioned above.

Regarding the elaboration of task-relevant information, the average $r_{wg(J)}$ is 0.88, ranging from 0.65 to 1. As for diversity beliefs, the aggregation of the individual level to team level is justified. Finally, the average $r_{wg(J)}$ is 0.86, ranging from 0.25 to 1 which means that also here the aggregation to a group level is justified.

4.2 Data Analysis

In order to run the data analysis and test our hypotheses, we introduced our quantitative data in SPSS. The software is one of most commonly used tools by market researchers, survey companies, education researchers, and many more for the processing and analyzing of survey data. Data analysis was divided in 3 parts. Firstly, all the items that were phrased negatively were reversed coded in a positive way (in regards with diversity beliefs and psychological safety, as already mentioned). During this step, the data were checked on missing values and outliers. Also, the mean, standard deviation, and the descriptive statistics were calculated. The second part was related to the creation of the Leader Variables (Leader Performance and Leader Creativity), to the creation of a new Dataset containing all the interrater agreements ($r_{wg(J)}$) as well as to merge the team dataset with the leader dataset. Then, the third step was dedicated to test models and hypotheses. The hypothesis testing was conducted through macro PROCESS, a logistic regression path analysis modelling tool for SPSS that had to be installed manually. It is commonly used for estimating direct and indirect effects in single and multiple mediator models and other kind of relationships (Hayes & Matthes, 2009). In this study, p -values less than 0.5 are considered to be significant ($p < 0.5$) (Field, 2009). The models used to test mediations, moderators and moderated-mediation effects were model 1, model 4 and model 7 respectively. According to Hayes (2009), using PROCESS brings advantages over the OLS (Ordinary Least Squares) regression by using bootstrapping in the regression model analysis. Therefore, bias corrected bootstrapping with 5,000 samples was set. In order to test the significance of indirect effects, zero should not end up between the lower and upper bound: in

case both of the bound (lower and upper) show a negative number, the indirect effect is considered to be significantly negative, whereas a positive lower and upper bound can be interpreted as a positive mediation effect.

4.3 Results

The means, standard deviation (*SD*) and correlations of this study are shown in Table 1. As it can be noted, no significant correlations were found between age diversity and diversity beliefs as well as between sexual orientation diversity and diversity beliefs to support the hypotheses presented ($p < 0.5$). Furthermore, no variables showed a significant correlation with team outcomes performance and creativity, addressing the absence of any direct effects. However, the significance correlation between psychological safety and the elaboration of task relevant information ($r = 0.40$, $p < 0.1$) suggests the presence of a moderating effect. Additionally, a positive correlation ($r = 0.66$, $p < 0.1$) was found between performance and creativity, suggesting that certain conditions necessary for performance lead to a higher level of team creativity. Finally, both team diversity appeared to have a negative correlation with team performance and creativity.

Tab.4.1 – Descriptive Statistics and Bivariate Correlations

| Variable | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---------------------------------------------|-------|-------|-------|--------|-------|--------|------|--------|---|
| 1. Diversity Beliefs | 4.75 | 0.69 | | | | | | | |
| 2. Age Diversity | 43.45 | 18.35 | 0.9 | | | | | | |
| 3. Sexual Orientation Diversity | 26.81 | 27.66 | 0.88 | 0.58** | | | | | |
| 4. Elaboration of task-relevant information | 5.52 | 0.49 | -0.18 | -0.10 | 0.008 | | | | |
| 5. Psychological Safety | 5.75 | 0.63 | -0.10 | 0.30 | -0.10 | 0.40** | | | |
| 6. Performance (output) | 5.82 | 0.74 | -0.11 | -0.39 | -0.77 | 0.24 | 0.19 | | |
| 7. Creativity (output) | 5.68 | 0.66 | -0.10 | -0.06 | -0.16 | 0.25 | 0.19 | 0.66** | |

* $p < 0.05$

** $p < 0.01$

In the present study, we use an adaptation of the Categorization and Elaboration Model proposed by Van Knippenberg et. al (2004). Thus, I started by testing the simple mediation model – model 4 - in order to test hypotheses 1a, 1b, 1c, 1d. Then, I ran the simple moderation

analysis – model 1 – to test hypotheses 2a, 2b and 3a, 3b. I further proceed to test the full moderated mediation model – model 7, hypotheses 4.

Hypothesis 1

Table 2 and 3 present the results of the hierarchical multiple regression analysis, testing Hypothesis 1. The first hypothesis proposes that diversity in team leads to the elaboration of task relevant information, which in turn leads to enhanced team performance and creativity. In our analysis, diversity in teams is represented by sexual orientation diversity (1a – team performance, 1b – team creativity) and age diversity (1c – team performance, 1d – team creativity).

Results revealed that neither sexual orientation diversity, nor age diversity have an interaction effect, meaning that neither a more heterogeneous sexual orientation preferences, nor a more heterogeneous age diversity present in teams are significant predictors for the elaboration of task relevant information and, in turn, for team performance and creativity. From Table 2 and 3, it is apparent that hypothesis 1a ($B = -.002$, 95% CI: $-.01$ to $.006$); 1b ($B = -.003$, 95% CI: $-.011$ to $.003$); 1c ($B = -.001$, 95% CI: $-.014$ to $.010$) and 1d ($B = -.002$, 95% CI: $-.013$ to $.008$) were not supported, which means that teams more diverse in terms of sexual orientation and age do not lead to a better elaboration of task-relevant information compared to homogeneous groups.

Tab. 4.2 - Regression results of Mediation Analysis (Hp. 1a, 1c)

| Performance | | | | | | |
|---------------------------------------------------------|----------|-----------|----------|----------|------------------|------------------|
| <i>Total effect of X on Y</i> | | | | | | |
| | B | SE | t | p | LL 95% CI | UL 95% CI |
| Team Performance regressed on Sex. Orientation (a path) | -.02 | .004 | -.50 | 0.61 | -.010 | .006 |
| Team Performance regressed on Age (c path) | -.001 | .006 | -.25 | .80 | -.014 | .010 |

Tab. 4.3 - Regression results of Mediation Analysis (Hp. 1b, 1d)

| Creativity | | | | | | |
|--------------------------------------------------------|----------|-----------|----------|----------|------------------|------------------|
| <i>Total effect of X on Y</i> | | | | | | |
| | B | SE | t | p | LL 95% CI | UL 95% CI |
| Team Creativity regressed on Sex. Orientation (b path) | -.003 | .003 | -1.09 | .28 | -0.11 | .003 |
| Team Creativity regressed on Age (d path) | -.002 | .005 | -.442 | .66 | -.013 | .008 |

Hypothesis 2

Hypothesis 2 proposes that the relationship between workgroup diversity in terms of sexual orientation (a) and age (b) and the elaboration of task-relevant is moderated by diversity beliefs. More in detail, we propose that the relationship will be stronger for members holding pro-diversity beliefs, enhancing higher level of team performance and creativity. As presented in Table 4, no significant effects were found in this relationship considering sexual orientation diversity ($B = -.002, p > 0.5$). This means that teams holding pro-diversity beliefs among heterogeneous sexual orientation preferences of the other members is not a necessary condition to perform better and in a more creative way. As for sexual orientation, also analyzing diversity beliefs in terms of age diversity did not provide significance results ($B = -.001, p > 0.5$), meaning that at higher level of pro-diversity beliefs regarding the age of team members, teams do not perform better or more creatively.

Tab. 4.4 - Regression results of Moderation Analysis (Hp. 2a, 2b)

| <i>Diversity Beliefs</i> | | | | | | |
|--------------------------------------------|----------|-----------|----------|----------|------------------|------------------|
| Independent variables | B | SE | t | p | LL 95% CI | UL 95% CI |
| Sexual Orientation Diversity (a path) | .003 | .002 | .122 | .903 | -.005 | .005 |
| Diversity Beliefs | -.150 | .114 | -1.31 | .196 | -.381 | .809 |
| Interaction | -.002 | .004 | -.531 | .598 | -.011 | .006 |
| Overall Model R² = 0.039 | | | | | | |
| Age Diversity (b path) | -.001 | .004 | -.237 | .813 | -.010 | .008 |
| Diversity Beliefs | -.104 | .110 | -.954 | .345 | -.326 | .117 |
| Interaction | -.001 | 0.008 | 0.646 | 0.521 | -0.011 | 0.021 |
| Overall Model R² = 0.196 | | | | | | |

Hypothesis 3

As for Hypothesis 2, Hypothesis 3 proposes that the relationship between Sexual Orientation diversity (3a) and age diversity (3b) and the elaboration of task-relevant information is mediated by psychological safety. In this case, I suppose that at higher level of psychological safety, the relationship will be stronger. Results presented in Table 5 show that diversity in terms of sexual orientation ($B = -.003, p < 0.5$) and age ($B = -.005, p < 0.5$) was not significantly correlated at high level of psychological safety. Therefore, for team members to feel psychologically safe in their work environment (team level) is not a necessary condition to perform better and creatively. For example, for teams characterized by psychological safety, members are not likely better at elaborate information when tasks require more intellectual and complex problem-solving processes. Thus, in this study also hypothesis 3 is not supported.

Tab. 4.5 - Regression results of Moderation Analysis (Hp. 3a, 3b)

| <i>Psychological Safety</i> | | | | | | |
|--------------------------------------------|----------|-----------|----------|----------|------------------|------------------|
| independent variables | B | SE | t | p | LL 95% CI | UL 95% CI |
| Sexual Orientation Diversity (a path) | -0.003 | 0.0027 | -0.116 | 0.907 | -0.005 | 0.005 |
| Psychological Safety | 0.301 | 0.109 | 2.76 | 0.008 | 0.081 | 0.521 |
| Interaction | 0.0047 | 0.0038 | 1.247 | 0.219 | -0.002 | 0.012 |
| Overall Model R² = 0.196 | | | | | | |
| Age Diversity (b path) | -0.005 | 0.004 | -1.408 | 0.166 | -0.014 | 0.0025 |
| Psychological Safety | 0.328 | 0.106 | 3.080 | 0.003 | 0.113 | 0.543 |
| Interaction | 0.008 | 0.006 | 1.396 | 0.169 | -0.003 | 0.020 |
| Overall Model R² = 0.214 | | | | | | |

Hypothesis 4

Finally, to test Hypothesis 4, I performed a full moderated mediation model following Hayes (2009). Again, I used macro PROCESS which was previously installed in SPSS. I tested moderation mediation separately for each diversity dimension; in Table 6 results are presented. First of all, I performed the analysis on the variables of sexual orientation (X), performance (Y), elaboration of task-relevant information (M) and diversity beliefs (W) by using model 7 of Hayes's guideline. Then, I performed the same analysis using psychological safety as moderator (W). Since in this study team outcomes are measured as team performance and creativity, I ran the analysis using the same model and moderators, but using Creativity as variable Y. The effect of the moderator variables sexual orientation and age diversity beliefs

were tested by using bootstrapping, on three levels (*-1 standard deviation, mean, 1 standard deviation*). As can be noted in Tab. 6, diversity beliefs considering sexual orientation ($B = -.008$, $95\%CI: -.006$ to $.002$) do not influence the mediation effect in both cases of performance and creativity. Also, in the case of age, diversity beliefs do not significantly influence the mediation effect ($B = .002$, $95\%CI: -.002$ to $.001$).

Considering psychological safety as moderator (W), results show a weak mediation effect ($B = .003$, $95\%CI: -.002$ to $.018$) in the case of age (X). It is important to underline the fact that results should be interpreted with caution, since the bootstrapping is balanced around the critical point of being significant under a confidence of 95%. To conclude, the results testing Hypothesis 4 underline that the moderated mediation effect of diversity beliefs in terms of sexual orientation and age are not significant for team performance and creativity. Also, psychological safety seems to have weak effect when considering age as diversity dimension. Therefore, Hypothesis 4 is not supported.

Tab. 4.6 – Moderated Mediation Analysis Results (Hp.4)

| Moderator | Performance | | | | Creativity | | | | | |
|----------------------|---------------------------------------------------------|---------------|-----------------|-----------------|------------------------------------------|---------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|
| | <i>Index of moderated mediation: Sexual Orientation</i> | <i>Index</i> | <i>BootSE</i> | <i>BootLLCI</i> | <i>BootULCI</i> | <i>Index of moderated mediation: Sexual Orientation</i> | <i>Index</i> | <i>BootSE</i> | <i>BootLLCI</i> | <i>BootULCI</i> |
| Diversity Beliefs | | -.008 | .002 | -.006 | .002 | | -.008 | .002 | -.006 | .002 |
| Psychological Safety | | .001 | .001 | -0.001 | .005 | | .001 | .001 | -.001 | .005 |
| | <i>Index of moderated mediation: Age</i> | | | | <i>Index of moderated mediation: Age</i> | | | | | |
| | <i>Index</i> | <i>BootSE</i> | <i>BootLLCI</i> | <i>BootULCI</i> | <i>Index</i> | <i>BootSE</i> | <i>BootLLCI</i> | <i>BootULCI</i> | | |
| Diversity Beliefs | .002 | .003 | -.002 | .001 | .001 | .003 | -.002 | .011 | | |
| Psychological Safety | .003 | .003 | -.002 | .018 | .002 | .002 | -.002 | .007 | | |

5. DISCUSSION

The goal of this study was to explore the relationship between team diversity and team outcomes measured as team performance and team creativity. We further examined the moderation role of diversity beliefs and psychological safety, as well as the mediation role of the elaboration of task-relevant information. During the last twenty years, the study of diversity and its implications at team and organizational level has been receiving increasing attention in the literature. However, previous research about diversity yielded inconsistent conclusions. Findings of this study, which were based on filled data gathered from multiple participants (team members and leaders), contribute to the existing literature by addressing the interaction

effect of diversity beliefs and psychological safety on the level of the elaboration of task-relevant information processes that team with differences in sexual orientation and age engage on. Overall, this research offers mixed results regarding the direct effect of diversity on team performance. First, findings showed a nonsignificant mediating effect of the elaboration of task-relevant in the relationship between workgroup diversity and team outcomes. Hence, team members with different sexual orientation preferences and age are not more likely to engage in the elaboration of task-relevant information (which in the study refers to the degree to which information is shared, processed and integrated in group interaction). However, realizing the promise of team diversity as a driver to achieve better team outcomes has proven itself to be an intricate challenge, since a growing body of literature has shown that diversity (both objective and perceived) can also result in negative or non-significant effects on team outcomes (Bell, 2007; Joshi & Roh, 2009). An explanation of the obtained results could be linked to the work of Shemla & Wegge (2019). In reviewing the literature on perceived diversity, the authors provided a systematic integration of the different conceptualizations of the construct throughout three different theories. The first theory, *perceived self-to-team diversity*, refers to what extent individual team members perceive themselves to be different from their group or unit. This perspective emphasizes processes and outcomes associated with the experience of individuals within their group (Shemla et al., 2019). It has been shown that perceived self-to-team dissimilarity decreases the individual's task and social exchanges, reducing cooperation between members and team performance (Harrison, Price, Gavin & Florey 2002). Although there is some evidence for the mediating role of the elaboration of task-relevant information, future research should provide more evidence regarding the role of task-relevant processing and decision-making requirements, perhaps by including measures of elaboration of task-relevant information in diversity research and relating these to either measures of task characteristics (Stewart & Barrick, 2000). Another explanation might be linked to the social categorization theory mentioned in the first part of the study. In fact, this perspective is believed to be the root cause of both bias in intergroup attitudes and problematic behaviors, leading individuals to hold more positive feelings for people considered as "more similar" and more negative feelings for people considered as "more different". Since the elaboration of task-relevant information that is proposed to enhance team performance requires attention to and elaboration of communication from diverse others, we point out that intergroup biases caused by workgroup diversity interfere with diversity's potential to elicit elaboration of task-relevant information.

Also, this research proposed that diversity beliefs and psychological safety can increase the elaboration of task-relevant information, and subsequently team performance and creativity. Diversity beliefs, especially pro-diversity beliefs, are able to boost the positive outcomes on the elaboration and performance. According to the literature, members that hold pro-diversity beliefs are more open to cooperate, communicate and promote the achievements of team goals through interaction and participation with other members (van Dick et al., 2008). However, in contrast to what I expected to find, pro-diversity beliefs did not enhance the elaboration of information. There are multiple factors that might explain the obtained results. First of all, diversity beliefs in this study are related to two diversity dimensions – one subjective and the other objective - sexual orientation and age respectively. Sexual orientation has not been previously deeply researched, since it is considered an invisible stigma. It is widely demonstrated that members of stigmatized groups are discredited, face negative social identities and are targeted for discrimination (Ragins, Singh & Cornwell, 2007). Indeed, one of the most critical challenges faced by employees with invisible stigmas, such as sexual orientation preferences, is whether to disclose their stigmatized identity to others in the workplace. It has been found that disclosure is linked to verbal harassment, job termination and even physical assault (D'augelli & Grossman, 2001). Recently, pressure from LGBT employees, policymakers and unions has pushed employers to end discriminatory practices against LGBT workers (Badgett, 2001). A practical example might be the latest decision taken by the Supreme Court of the United States which ruled that employment discrimination on the basis of sexual orientation and gender identity is prohibited under the federal civil rights law. This has been the most important affirmation of LGBT rights in the United States since 2015, when Supreme Court legalized same-sex marriage (in abcnews.com). Even though it seems that there is an increasing representation of LGBT people asking for equal treatment in the workplace, psychological strain and fear are still the main issues of the topic. Thus, I am not surprised that analyzing factors of diversity dimensions did not lead to significant results: if people do not feel comfortable or see the workplace as hostile and unsupportive, they will not answer sincerely, hiding themselves behind a falsified identity. Another reason for the absence of the relationship could be that our research mainly included small teams, since more than a half of the sample refers to teams ranged between 2 and 6 people. This reason may be linked also with the previous explanation regarding the difficulties of obtaining a significant relationship with sexual orientation: in answering the questionnaire, team members could have given socially desirable and ideology-driven answers regarding their diversity beliefs about sexual orientation and age, while behavior is not consistent with their perspective. For instance,

people aware of diversity in their team may have shown to value diversity, while in practice they still interact more closely to those more similar to themselves. As for sexual orientation diversity, findings about diversity beliefs about age did not point put a moderation effect on the relationship between team diversity and the elaboration of task-relevant information. The first potential explanation of the absence of a relationship could be the social categorization theory. According to this theory, age diversity stimulates social categorization of team members, inhibiting the elaboration of task-relevant information and perspectives (van Knippenberg et al., 2004). However, previous studies rely on the fact that age diversity may not enhance the elaboration of information processing nor may lead to negative social categorization processes: team members of various ages do not necessarily have more knowledge or expertise merely because they are older (Schneid, Isidor, Steinmetz & Kabst, 2016). It has been argued that is the quality and depth of the job experiences not the duration per se that lead to the development of job knowledge and expertise (Quinones, Ford, & Teachout, 1995). Perhaps, our participants did not perceive age diversity as so important during daily interactions, blurring the boundaries between ingroup and outgroup stimulated by social categorization. Thus, teams begin to develop a new collective identity (Gaertner, Dovidio, Anastasio, Bachman & Rust, 1993).

This study further examines the moderation role of psychological safety in the relationship between workgroup diversity and the elaboration of task-relevant information. According to the literature, psychological safety is a key determinant of high-quality communication and decision-making processes, playing an important role within workplace teams (Edmondson et al., 2014). Results in our study showed a non-significant moderating role of psychological safety. Therefore, when psychological safety is high, team members are not more likely to engage in the elaboration of information processes, when members consider workgroup diversity to not threaten the psychological safe environment they work in. This means that team members instead of taking the responsibility of mistakes, blame, accuse or discredit other members. They do not proactively seek to identify errors and to take additional risks to engage in “second order” problems (Kaloudis in medium.com, 2019). As a consequence, psychological safety does not indirectly influence team performance and creativity throughout a moderation effect.

To justify the absence of meaningful correlations regarding the mediation analysis, thus not supporting Hypotheses 1 (a,b,c,d), we propose an explanation provided by Hayes (2013).

The author argued that “mediation analysis as practiced in the 21st century no longer imposes evidence of simple association between X and Y as a precondition”, meaning that the lack of significant results does not necessarily predict disapproved causation. Indeed, we believe that diversity beliefs and psychological safety need more research in order to understand their actual effects on the relationship between team diversity and team outcomes.

6. CONCLUSION

6.1 Practical Implications

Regarding the practical implications, the mixed results of the present study underline the crucial role that diversity is playing in today’s working environment. In reviewing the literature, we have shown that this increasing diversity can lead to both positive and negative effects on group identification and measures of information processing in line with individual’s belief about diversity. We suggest that companies who want to leverage their commitment to diversity to improve their outcomes should consider ways in which they can create and sustain a supportive workplace climate. This includes both LGBT-supportive policies and more broad support from team members and supervisors. The key is to educate people in diverse settings throughout training and organizational strategies, in order to value diversity in achieving individual and team goals and thus propagating more pro-diversity beliefs.

6.2 Limitations

There are several limitations to this research. Most research on this topic supports the idea that diversity enhances team performance and organizational outcomes, but it is necessary to explore the implications of the CEM for other outcomes rather than only for performance and creativity. Since all the diversity dimensions can, in principle, have both positive and negative effects, processes cannot be merely assumed on the basis of the dimensions explored in this study. As already mentioned, the sample of our research mainly included small teams, representing a narrow range of sexual orientation and age diversity. Consequently, the gathered data did not differ much from each other. Moreover, team size could undermine the anonymous nature of the project: since employees may have felt the questionnaire to not be fully anonymous, they have given socially desirable answers instead of answering following their own actual feelings. Another limitation is linked to the historical context in which the analysis was conducted. In fact, the delivery of our research questionnaires coincided with the occurrence of a global pandemic which has considerably slowed down our data collection. Therefore, the response rate was low, leading our analysis to be longer and less reliable. Finally, teams included in the research registered a low seniority, and if combined with the high rotation within teams in the consultancy sector, there might be additional limitations regarding the study.

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ANNEX A - SURVEY CONSULTANTS

1. This survey is part of a research project carried out by a group of researchers from ISCTE-Instituto Universitário de Lisboa, focused on team effectiveness in the context of consultancy and audit firms. The main objective of this project is to identify the factors related to teamwork that contribute to the effectiveness of the projects carried out by the organization and to the satisfaction of both the clients and the consultants themselves.
2. The data collected will be exclusively analyzed by the research team and anonymity will be guaranteed.
3. The questions are written in a way that you only have to point out the answer that seems most appropriate for you.
4. There is no right or wrong answers. We are only interested in your personal opinion.
5. For each question there is a scale. You can use any point on the scale as long as you consider it is appropriate.
6. Respond to the entire questionnaire without interruption.

For any clarification, or to receive additional information about the study please contact: Prof.^a Ana Margarida Passos (ana.passos@iscte-iul.pt).

Thanks for your collaboration!

To answer this questionnaire think about the consulting/ audit project you are currently involved in and the team you are working

1. The following questions attempt to describe **team behaviors**. Please indicate to what extent you agree with each of them using the response scale:

| | Totally disagree | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree | Totally agree | | | | | | | |
|----|------------------------------------------------------------------------------------------------------|-------------------|----------|----------------------------|-------|----------------|---------------|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | |
| 1. | We engage in creative action to solve problems for which there are no easy or strait forward answers | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | We find innovative ways to deal with unexpected events | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | We adjust and deal with unpredictable situations by shifting focus and taking reasonable action | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | We devise alternative plans in very short time, as a way to cope with new task demands | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | We search and develop new competences to deal with difficult situations/problems. | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | We adjust the personal style of each member to the team as a whole | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | We improve interpersonal relationships taking into account the needs and aspirations of each member. | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. | We maintain focus when dealing with multiple situations and responsibilities | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

2. The following statements relate to **feelings** that some teams have **about their work**. Please use the same scale as above.

| | | | | | | | | | | | | | | |
|----|----------------------------------------------------------|--|--|--|--|--|--|---|---|---|---|---|---|---|
| 1. | At our work, we feel bursting with energy | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | At our job, we feel strong and vigorous | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | We are enthusiastic about our job | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Our job inspires us | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | When we arrive at work, we feel like starting to work | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | We feel happy when we are working intensely | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | We are proud of the work that we do in the organization. | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. | We are immersed in our work | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. | We get carried away when we are working | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

3. Please think about the **outcomes of your team's work**. Please continue to use the same rating scale.

| | | | | | | | | | | | | | | |
|----|---------------------------------------------------------------------|--|--|--|--|--|--|---|---|---|---|---|---|---|
| 1. | My team has a good performance | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | We are satisfied in working in this team. | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | My team is effective. | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | I would not hesitate to work with this team on other projects. | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | This team could work well on future projects. | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | My team is good at generating novel ideas | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | We are good to solve problems creatively. | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. | My team believes that we are able to produce new ideas or solutions | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|----|------------------------------------------------------|---|---|---|---|---|---|---|
| 9. | We have the talent and skills to do well in our work | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----|------------------------------------------------------|---|---|---|---|---|---|---|

4. The following questions are related to **how your team works as a group**. Enter, please, how often each one of these situations occurs during your work. Please use the following rating scale:

| Never | Very rarely | Rarely | Sometimes | Often | Very often | Always |
|-------|-------------|--------|-----------|-------|------------|--------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|----|--------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|
| 1. | How much emotional conflict is there among members in your work team?. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | How much friction is there among team members? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | How frequently are there conflicts about ideas in your work team? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | To what extent do team members disagree about time allocation in your work team (how much time to spend on tasks)? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | To what extent are there differences of opinion in your work team | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | How often do people in your team disagree about opinions regarding the work being done? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | To what extent are there disagreements about how long to spend on specific tasks in your team? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. | How much are personality conflicts evident in your work team? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. | To what extent is there is conflict about how you should pace task activities in your team? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

5. The following questions are about **how your team works**. Please use the following rating scale.

| Totally disagree | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree | Totally agree |
|------------------|-------------------|----------|----------------------------|-------|----------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

In my team...

| | | | | | | | | |
|----|---------------------------------------|---|---|---|---|---|---|---|
| 1. | We have the same way of thinking | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | We have the same knowledge and skills | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | We see the world the same way | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | We agree on what is right and wrong | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

6. Think about **how team members relate to each other**. Please indicate to what extent you agree with each of the following statements. Please continue to use the rating scale.

| | | | | | | | | |
|-----|-----------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|
| 1. | I can explain the emotions I feel to team members. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | I respect the opinion of team members, even if I think they are wrong. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | I can read fellow team members 'true' feelings, even if they try to hide them. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | My enthusiasm can be contagious for members of a team. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | I can discuss the emotions I feel with other team members. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | I am able to cheer team members up when they are feeling down. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | If I feel down, I can tell team members what will make me feel better. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. | When I am frustrated with fellow team members, I can overcome my frustration. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. | I am able to describe accurately the way others in the team are feeling. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. | I can get fellow team members to share my keenness for a project. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. | I can talk to other team members of the team about the emotions I experience | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. | When I talk to a team member I can gauge their true feelings from their body language. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. | I can provide the 'spark' to get fellow team members enthusiastic. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. | When deciding on a dispute, I try to see all sides of a disagreement before I come to a conclusion. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. | I can tell when team members don't mean what they say. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. | I give a fair hearing to fellow team members' ideas. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

7. **Think of teams in general**. Please continue to use the same rating scale.

| | | | | | | | | |
|----|---------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|
| 1. | I believe that team members' diversity is a key aspect to increase performance. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Belonging to a heterogeneous team can be the recipe for success. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | I think that teams work better if the elements that compose them are similar to each other. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|----|-------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|
| 4. | I believe that the teams perform better in the tasks if the elements that compose them are similar to each other. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----|-------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|

8. Considering your team as a whole, indicate to what extent your team is heterogeneous in relation to each of the dimensions (from 0 to 100%).

| | | | | | | | | | | | | | |
|------------------------|------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|--------------------|
| Nationality | Very homogeneous | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | Very heterogeneous |
| Age | | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | |
| Sexual orientation | | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | |
| Educational Background | | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | |

9. The following questions refer to the way **you act as a team member**. Please use the following scale to answer:

| Totally disagree | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree | Totally agree |
|------------------|-------------------|----------|----------------------------|-------|----------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|----|------------------------------------------------------------------------------------|---|---|---|---|---|---|---|
| 1. | Proactively develop and make suggestions for issues that may influence the team. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Proactively suggest new projects which are beneficial to the team | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Raise suggestions to improve the team's working procedure | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Proactively voice out constructive suggestions that help the team reach its goals. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | Make constructive suggestions to improve the team's operation | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

10. Think about **how team members work with each other**. Please continue to use the same rating scale.

| | | | | | | | | |
|----|--------------------------------------------------------------------------|---|---|---|---|---|---|---|
| 1. | The group members contributed a lot of information during the group task | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | The group members contributed unique information during the group task | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | During the task, we tried to use all available information. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

11. Think about the project your team is involved and in **the way team members work with each other**. Please indicate to what extent you agree or disagree with each statement. Continue to use the same rating scale:

| | | | | | | | | |
|----|---------------------------------------------------------------------------------|---|---|---|---|---|---|---|
| 1. | If you make a mistake on this team, it is often held against you. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | It is difficult to ask other members of this team for help | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | It is safe to take a risk on this team. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Team members don't tolerate each other's mistakes: | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | No one on this team would deliberately act in a way that undermines my efforts. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

12. Think about **your leader and his/her leadership behaviors**. Indicate to what extent you agree with each of the statements. Please use the same rating scale:

Our team leader.....

| | | | | | | | | |
|-----|--------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|
| 1. | Encourages information exchange between members. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Encourages openness in the discussion meetings | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Tells the team how events or situations the team is faced with should be interpreted | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Tells the team how to understand events or situations | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | Explains the meaning of ambiguous events or situations to the team. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | Encourages members to share ideas with each others | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | Is a role model for collaboration and knowledge exchange | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. | Encourages the team to collectively interpret things that happen to the team. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. | Promotes team discussions about different perspectives of events or situations. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. | Encourages team members to provide their individual viewpoint on events or situations. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. | Promotes the development of a shared understanding of events or situations among the team member | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. | Encourages the team to collectively make sense of ambiguous situations. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. | The leader changes the way the team interprets events or situations the team is faced with | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|-----|-----------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|
| 19. | The leader alters the way the team thinks about events or situations the team is faced with.. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. | The leader modifies how the team thinks about events or situations the team is faced with.. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

13. Think about your **team leader’s behavior**. Please use the following rating scale to answer.

| Totally disagree | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree | Totally agree |
|------------------|-------------------|----------|----------------------------|-------|----------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|----|----------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|
| 1. | Encourages the team to be responsible for determining the methods, procedures, and schedules with which the work gets done | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Urges the team to make its own decisions regarding who does what tasks within the team | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Encourages the team to make most of its own work-related decisions | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Encourages the team to solve its own problems. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | Encourages the team to be responsible for its own affairs | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | Encourages the team to assess its performance | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

14. Think now about the project and the **technological support** (e.g., intranet, email, knowledge storage and / or communication systems) that you have available. Continue to use the same scale

The technological support we have available:

| | | | | | | | | |
|----|---------------------------------------------------------------|---|---|---|---|---|---|---|
| 1. | Allows us to work together regardless of time and location. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Allows us to communicate effectively between team members | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Allows us to search and access information whenever necessary | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Allows us to store our work continuously | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | It suits my team's daily tasks | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | It is quite useful. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

15. **Think about the members of your team**. Please continue to use the same rating scale.

| | | | | | | | | |
|----|---------------------------------------------------------------------------------------|---|---|---|---|---|---|---|
| 1. | We know which team members have expertise in specific areas | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | I do not have much faith in other members expertise” | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Team members are comfortable accepting procedural suggestions from other team members | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | I trust on other team members knowledge about the project | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | Our team has very few misunderstandings about what to do. | | | | | | | |

16. Think about **the way your team works** and indicate to what extent you agree with each of the following statements. Please use the following scale:

| Totally disagree | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree | Totally agree |
|------------------|-------------------|----------|----------------------------|-------|----------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|----|----------------------------------------------------------------------------------|---|---|---|---|---|---|---|
| 1. | Team members share their work reports and official documents with other members. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Team members apply knowledge learned from experience | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Team members provide their manuals and methodologies for other members. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | Team members use knowledge to solve new problems | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | Team members share their experience or know-how from work with other members | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | Team members apply knowledge to solve new problems. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

17. Think about **your workplace**. Please continue to use the same rating scale.

My location / workstation allows me to:

| | | | | | | | | |
|----|------------------------------------|---|---|---|---|---|---|---|
| 1. | High levels of concentration. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Control distractions | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | Total transparency about what I do | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Finally, we would like to ask some socio-demographic data, essential to data analysis:

1. Sex: Male Female

2. Age: _____ years

3. Job function in the organization:

4. How long have you been working in this organization?

- Less than 1 year 1 to 3 years 3 to 5 years 5 to 7 years More than 7 years

5. Number of people who work on your team: _____

THANK YOU VERY MUCH FOR YOUR PARTICIPATION!

ANNEX B - SURVEY LEADER

1. This survey is part of a research project carried out by a group of researchers from ISCTE-Instituto Universitário de Lisboa, focused on team effectiveness in the context of consultancy and audit firms. The main objective of this project is to identify the factors related to teamwork that contribute to the effectiveness of the projects carried out by the organization and to the satisfaction of both the clients and the consultants themselves.
2. The data collected will be exclusively analyzed by the research team and anonymity will be guaranteed.
3. The questions are written in a way that you only have to point out the answer that seems most appropriate for you.
4. There is no right or wrong answers. We are only interested in your personal opinion.
5. For each question there is a scale. You can use any point on the scale as long as you consider it is appropriate.
6. Respond to the entire questionnaire without interruption.

For any clarification, or to receive additional information about the study please contact: Prof.^a Ana Margarida Passos (ana.passos@iscte-iul.pt).

Thanks for your collaboration!

To answer this questionnaire think about the TEAM and the specific project you are leading

1. The following questions describe team's behaviors. Please indicate to what extent you agree with each of them using the following rating scale:

| Totally disagree | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree | Totally agree |
|------------------|-------------------|----------|----------------------------|-------|----------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|----|----------------------------------------------------------------------|---|---|---|---|---|---|---|
| 1. | This team has a good performance. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | Members are satisfied in working in this team.. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | This team is effective. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | I would not hesitate to work with this team on other projects. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | This team could work well on future projects. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | This team is good at generating novel ideas | | | | | | | |
| 7. | The team is good to solve problems creatively. | | | | | | | |
| 8. | The team believes that we are able to produce new ideas or solutions | | | | | | | |
| 9. | The team has the talent and skills to do well in our work | | | | | | | |

2. Think about **your behavior as a team leader**. Please use the same rating scale.

| | | | | | | | | |
|----|-----------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|
| 1. | I encourage the team to be responsible for determining the methods, procedures, and schedules with which the work gets done | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | I urge the team to make its own decisions regarding who does what tasks within the team | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | I encourage the team to make most of its own work-related decisions | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | I encourage the team to solve its own problems | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | I encourage the team to be responsible for its own affairs | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | I encourage the team to assess its performance | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Finally, we would like to ask some socio-demographic data, essential to data analysis:

1. Sex: Male Female

2. Age: _____ years

3. Job function in the organization:

4. How long have you been working in this organization?

Less than 1 year 1 to 3 years 3 to 5 years 5 to 7 years More than 7 years

THANK YOU VERY MUCH FOR YOUR PARTICIPATION!