

LEARNING TO BE A HERO:

(HEalthy & Resilient Organization)

Linking organizational learning practices
to healthy and resilience organizational outcomes

Israel Sánchez-Cardona



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A todas mis comunidades de aprendizaje....

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PRÓLOGO

Este trabajo comenzó como un viaje de aprendizaje. Cuando comencé en esta travesía para estudiar las organizaciones saludables y resilientes, para mí era importante incorporar la noción de aprendizaje. Los facilitadores del aprendizaje en las organizaciones no solo favorecen la ventaja competitiva de las organizaciones, sino que contribuyen a la colaboración, el intercambio, la confianza, el diálogo productivo, la eficacia, entre otros indicadores de salud y efectividad organizacional. De igual forma, el aprendizaje, como actividad sociocultural, está presente en nuestra participación de las constelaciones de prácticas de las que formamos parte dentro y fuera de las organizaciones. Por tanto, parece crucial, sino ineludible, incorporar esta noción al estudio de las organizaciones saludables y resilientes.

Sin embargo, se trata de una ardua tarea dado que el aprendizaje es un proceso complejo, dinámico y multivariado. De ahí la necesidad de hacer una aproximación desde diferentes niveles y tomando en cuenta los múltiples factores que inciden en el desarrollo de organizaciones de aprendizaje saludables y resilientes. Utilizando marcos diversos dentro de la investigación en psicología del trabajo y las organizaciones, en general, y la psicología positiva en particular, así como desde la noción de la capacidad de aprendizaje organizacional, este trabajo de tesis hace una propuesta sobre facilitadores individuales, a nivel de equipo y organizacional que promueven el aprendizaje y el bienestar en las organizaciones.

Desde esta propuesta se intenta, de algún modo, aproximarse a la naturaleza compleja del aprendizaje y sus facilitadores como recursos valiosos para lograr el bienestar y las capacidades individuales y colectivas para el funcionamiento óptimo. Este

proyecto pretende comenzar un diálogo productivo que genere mayores y mejores propuestas al estudio del aprendizaje en organizaciones saludables y resilientes.

CHAPTER 1

General Introduction

Nowadays, organizations operate under an ever-change context with constant technological transformations, local and international economic crisis, and increasing political and social forces. In such contexts characterized by uncertainty, adversity and rapid changes, organizations are required to survive, strive and emerge strengthened and resourceful amidst turmoil (Edmondson, 2008; Rodríguez-Sánchez & Vera, 2015; Salanova Llorens, Cifre, & Martínez, 2012; Sutcliff & Vogus, 2003). ***What should organizations do to maintain optimal functioning at all levels? How can they invest in human capital to survive, thrive and grow?***

These questions are relevant to understand what conditions, resources, practices and processes are important to promote and develop individuals, teams and organizations to achieve healthy and resilient outcomes (Salanova, 2009; Salanova, Llorens, Cifre, & Martínez, 2012). Organizations must be designed to mitigate and protect from financial risk factors (Skipper, 2009). This design should consider the organizational mission, financial resources, and operations, as well as what has been called one of the most valuable resources; its people. However, in times of crisis, personnel is one of the first affected areas (e.g., downsize, less learning and development opportunities) (Cook, MacKenzie, & Forde, 2016; Gittell Cameron, Lim, & Rivas, 2006), even though their actions guarantee operations and support organizations to achieve their mission and objectives. In Skipper's (2009) words: "...it is the employees and other people involved in organizations that make things happen and without them, the mission fails every time" (p. 60).

Accordingly, a valuable approach for organizations to survive, thrive and improve optimal functioning in stressful situations is the development of employees and teams (Hatch & Dyer, 2004; Verburg, Hartog, & Koopman, 2007). Stone (2016) noted, for example, that by providing opportunities for growth and development, organizations contribute to the quality of employee work experience and realize the benefits of developing to their full potential. This seems to remain important in today's organizations. The Association for Talent Development "2016 State of the Industry Report" informed that USA organizations spent an average of \$1, 252.00 (US dollars) per employee in training and development initiatives during 2015, which represented an increase of \$23.00 (US dollars) in contrast with the year before. The report concluded that developing the knowledge, skills and abilities of its workforce seems to be a priority for organizations (Association for Talent Development, 2016).

In order to develop healthy organizations, opportunities to continuous learning and development have to be in place for constant evolution and transformation (Salas & Weaver, 2016). These opportunities for continuous development and learning at the individual and team level have important implications such as advanced skill acquisition, retaining talent, increased value of human capital, and gaining skills for competitive advantage (Aguinis & Kreiger, 2009; Salas & Weaver, 2016). In a survey conducted by Kaye and Jordan-Evans (2008), participants reported opportunities for career growth, learning, and development, as well as opportunities for exciting and challenging work amongst the principal reasons to stay in a company.

Nonetheless, in contracting economic conditions, allocating resources for growth and development might be seen as costly and irrelevant. On the contrary, Lengnick-Hall,

Beck and Lengnick-Hall (2011) proposed that organizational capacity for resilience relies heavily on strategically managing human resources competences of core employees. Moreover, they suggest that investment in human capital to develop employees who are learners and skilled at creating strong interpersonal ties build the foundation for resilience and knowledge management. Thus, organizations may not only proactively and systematically design efforts aimed for employees' growth, development and career promotion, but they can also systematically design team and organizational context to cultivate quality interactions, coordination, interdependence and psychological safety to promote team learning (Edmondson, 1999; Edmondson, 2004; Van den Bossche, Gijsselaers, Segers, & Kirschner, 2006). Through learning behaviors, teams and organizations adapt and improve (Edmondson, 1999, 2002, 2008). From this perspective, team learning process is necessary for building organizational learning and competitive advantage (Edmondson, 2002, 2008).

Based on these ideas, and providing answers to the questions presented earlier; this thesis addresses how learning is an important component to health and resilience in organizations from a multilevel perspective (Salanova et al., 2012). This research is based on the principal underpinnings of the Healthy and Resilient Organization (HERO) Model developed and validated by Salanova et al. (2012). In this end, this thesis examines learning from the individual (i.e., motivational dispositions to acquire mastery and skills in achievement situations), team (i.e., team learning) and organization (i.e., Human Resources learning practices). This work examines how these individual capacities, team processes and organizational resources are essential to: (1) develop healthy and resilient individuals and teams (i.e., psychological capital, satisfaction, team resilience and team

affect) and; (2) improve performance (i.e., individuals and teams). Hopefully, these findings will shed light upon what organizations should do to maintain optimal functioning in tumultuous and uncertain situations. One thing seems clear, organizations need to *learn* to *survive*.

Healthy and Resilient Organizations (HERO) Model

The HERO model defines healthy and resilient organizations as those that make systematic, planned and proactive efforts to improve the processes and outcomes of the employees, team and organizational levels. This model is based on previous theoretical and empirical findings from different areas such as work stress, human resources (HR) management, organizational behavior and positive organizational psychology (Salanova, Llorens, & Martínez, 2016). Based on the positive organizational psychology, the study of HEROs intends to understand the optimal functioning of individuals and groups at organizations, as well as the effective management of psychosocial well-being at work and the development of organizational health (Salanova, Martínez, & Llorens, 2014). Thereby, through systematic efforts these organizations become healthier and resilient.

Organizations are resilient since they can maintain positive adjustments under challenging conditions, bounce back from untoward events and maintain desirable outcomes. These efforts involve implementing healthy organizational resources at the task (i.e., autonomy, feedback), interpersonal (i.e., social relationships, leadership), and Human Resource (HR) practices (i.e., HR learning practices) to improve work environment. Human Resource practices, policies and activities are crucial for the development of resiliency at organizations (Lengnick-Hall et al., 2011). In particular, systematic development of learning capabilities within individuals, teams and

organizations contribute essentially to the development of resilience (Lengnick-Hall et al., 2011; Vogus & Sutcliffe, 2007). Organizations that implement healthy organizational practices (i.e., HR learning practices) will influence the development of teams and individuals (i.e., healthy teams) which in turn will lead to positive team and organizational outcomes (i.e., team performance, service quality) (Salanova, 2009; Salanova et al., 2012; Salanova et al., 2016). Furthermore, organizations that provide task and social resources (i.e., transformational leadership) may improve teams' well-being (i.e., psychological capital, team resilience, team affect) and performance.

This model differs from previous healthy workplaces models (DeJoy, Wilson, Vandenberg, McGrath-Higgins, & Griffin-Blake, 2010; Kelloway & Day, 2005; Wilson, DeJoy, Vandenberg, Richardson, & McGrath, 2004) in at least two features: (1) it incorporates the notion of resilience, proposing that during times of crisis and turmoil, organizations are able to learn from adversity and emerge stronger; and, (2) it extends healthy organization research by collecting quantitative and qualitative data from different sources (CEOs, supervisors, employees and costumers) and conduct analysis at the individual, as well as the collective level of analysis (group and organization). Empirical evidence support the propositions from this model (Acosta, Salanova, & Llorens, 2012; Acosta, Torrente, Llorens, & Salanova, 2013; Bustamante, Llorens, & Acosta, 2014; Cruz, Salanova, & Martínez, 2013; Gil, Llorens, & Torrente, 2015; Meneghel, Salanova, & Martínez, 2016; Salanova et al., 2012; Torrente, Salanova, Llorens, & Shcaufeli, 2012). Salanova et al. (2012) found that at the team level healthy employees/teams and healthy organizational outcomes were related. Accordingly, healthy organizational practices and resources were significantly and positively related to healthy

organizational outcomes through healthy employees/teams. This provides a powerful framework to base interventions and focus to develop resourceful and healthy workplaces in adversity and uncertain conditions (Llorens, Salanova, Torrente, & Acosta, 2013; Salanova, Llorens, Torrente, & Acosta, 2013). Implementation of healthy human resources management practices, particularly learning practices, provides not only competitive advantage (Pang, Chua, & Chu, 2008), but also well-being (Guest, 2017) and positive performance outcomes for individuals, teams and organizations (Fernández-Díaz, Pasamar-Reyes, & Valle-Cabrera, 2017; Nelissen, Forrier, & Verbruggen, 2017), leading to what I will call Healthy and Resilient Learning Organizations.

Healthy and Resilient Learning Organizations

The development of healthy and resilient organizations will be helpful to promote learning organizations. Indeed, human resources development has the opportunity to proactively influence learning in the workplace (Marsick & Watskins, 2003). Without learning, organizations tend to repeat the same routines and produce less sustainable performance improvements (Garvin, 1993). Classical theoretical approaches to organizational learning proposed that learning is a process of detecting and correcting errors (any feature of knowledge and knowing that inhibits learning) (Argyris, 2005). For organizations to thrive under challenging circumstances, double-loop learning, which is questioning its underlying policies and assumptions, is required for real and sustainable transformation (Argyris, 2005).

Learning organizations are those “skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insight” (Garvin, 1993, p. 3). Three building blocks are required for creating learning organizations: (1) a

supportive environment (where employees feel safe taking risks and exploring the unknown), (2) formal learning processes for activities such as gathering, interpreting and disseminating information, and, (3) leadership that reinforces learning. These building blocks could be developed as healthy organizational practices and resources (i.e., supportive environment and leadership) to promote, not only learning, but also wellness and performance at all levels of the organization (Garvin, 1993; Garvin, Edmondson, & Gino, 2008).

The proposal of Healthy and Resilient Learning Organizations derives from the theoretical and empirical propositions of the organizational learning and learning organization literature, in specific the organizational learning capability approach (Dibella, Nevis, & Gould, 1996; Goh & Richards, 1997; Hult & Farrell, 1997; Jerez-Gómez, Céspedes-Lorente, & Valle-Cabrera, 2005). Organizational learning capability acts as a facilitator of organizational learning processes and this approach stresses the importance of facilitating factors for organizational propensity to learn. Thus, many of the models and measurements seek to determine these facilitating factors (Chiva, 2004; Chiva & Alegre, 2009; Goh & Richards, 1997; Hult & Farrell, 1997).

Goh and Richards (1997), for example, proposed that “organizational learning is the product of individual and group learning applied to the accomplishment of the organization’s vision and performance goal and that certain management practices and internal conditions can either help or hinder the process” (p. 577). Thus, organizational conditions and managerial practices can be assessed and/or implemented to understand and enhance organizational learning capability (Alegre & Chiva, 2008; Goh & Richards, 1997; Gomes & Matte Wojan, 2017). As such, organizations need to deliberately create

the necessary condition to foster learning; consequently, managerial practices are key aspects to accomplish learning in organizations. Goh and Richardson (1997) presented a framework that summarizes five organizational characteristics and management practices relevant for learning in organizations: (1) Clarity of mission and vision (e.g., employees have a clear vision/mission of the organization and understand how they can contribute to its success); (2) Leadership (e.g., role of leaders to help employees to learn); (3) Experimentation (e.g., freedom employees have to pursuit new ways of getting the job done and to take risk); (4) Transfer knowledge (e.g., opportunities to learn from others and past failures); (5) Teamwork and group problem-solving (e.g., teamwork to solve problems and generate new and innovative ideas).

Chiva, Alegre and Lapiedra (2007) analyzed organizational learning and learning organization literature to determine the facilitating factors of organizational learning. They proposed five dimensions or facilitators of the organizational learning process, which are related to previous models (Goh & Richards, 1997; Jerez-Gómez et al., 2005): (1) Experimentation (e.g., degree to which new ideas and suggestions are attended), (2) Risk taking (e.g., tolerance of ambiguity, uncertainty and errors), (3) Interaction with the external environment; (4) Dialogue (e.g., sustain collective inquiry into the process, assumptions, and certainties of everyday experience), and (5) Participative decision making (e.g., level of employees' participation in the decision making process). This approach incorporates organizational and managerial characteristics that facilitate the organizational learning process or allow an organization to learn and thus develop a learning organization (Chiva & Alegre, 2009).

Research and conceptual models of organizational learning capability sustain that it not only fosters learning, but also relates to both employees' attitudes and performance. For example, some studies have found that organization learning capability relates to innovative and organizational performance (Alegre & Chiva 2008; Alegre, Pla-Barber, Chiva, & Villar, 2012; Gomes & Wojahn, 2017; Mallén, Chiva, Alegre, & Guinot, 2016) as well as with job satisfaction (Chiva & Alegre, 2009), emotional intelligence (Chiva & Alegre, 2008), altruism and trust (Guinot, Chiva, & Mallén, 2013; 2016), and factors associated with healthy and resilient organizations (Salanova et al., 2016).

Organizational practices aimed to actively promote learning of new abilities, skills or career advancement (e.g., HR learning practices) and to promote team learning (through leadership) may undoubtedly develop well-being outcome in individuals and organizations (Edmondson, 2003). Rego, Pina and Cunha (2009) report, for example, that perceptions of opportunities for learning and personal development are better predictors of pleasure, enthusiasm and vigor. Skillful, competent and well-prepared talent help teams and organizations to keep abreast of environmental challenges and respond appropriately. Team members with high quality interaction, social resources, supportive climate, trust, and positive affect will lead to team engagement, team resilience and team performance (Acosta et al., 2012; Cruz et al., 2013; Meneghel et al., 2016; Torrente et al., 2012). The teams' psychological states will therefore promote team learning, as means of sharing, questioning, reflecting and changing to adapt and growth.

Up until this point, it seems that learning process in organizations could be designed only based on organizational practices and resources. Although, these practices and resources are crucial to succeed in today's changing environment, the provision of

skills, abilities, and individual or collective new ways to approach work situations are meaningless without the motivation of individuals. Chadwick and Raver (2015) proposed that motivational dimension requires greater attention from the organizational literature to understand why certain individuals, groups and organizations are more likely to learn, despite similar skill sets. Achievement goal theory (Deweck, 1986) plays a key role in this understating. This theory proposed that individuals have stable motivational tendencies to pursue goals based on their underlying beliefs about their abilities and these goal orientations influence how individuals approach, interpret and respond to situations (Deweck, 1986; Pintrich, 2000; Vandewalle, 2003). Of particular interest is learning goal orientation, from which individuals believe that their abilities are dynamic, malleable and capable of improving through effort (Deweck, 1986). Learning goal oriented individuals focus on developing their competence by acquiring new skills, mastering new situations and learning from experience. This goal orientation is related to greater effort, persistence, efficacy, feedback seeking, successful acquisition of new skills and intrinsic motivation to succeed, leading to performance improvements and well-being (Gegenfurtner, Könings, Kosmajac, & Gebhardt, 2016; Katz-Navon, Unger-Aviram, & Block, 2016; Kozlowski, Gully, Brown, Salas, Smith, & Nason, 2001; Payne, Youngcourt, & Beaubien, 2007; Vandewalle, 2003; Vandewalle, Cron, & Slocum, 2001; Van Dierendonck & van der Gaast, 2013).

Although studies have mainly conceptualized learning goal orientation as an individual phenomenon, recent propositions suggest the importance of emergence goal orientations in the study of organizational learning: "...individual's motivational tendencies may emerge and influence learning processes at the higher levels of analysis

within organizations” (Chadwick & Raver, 2015, p. 958). Therefore, these motivational tendencies of individuals may play a role in how organizations should hire, allocate, promote and support employees to align and potentiate their learning capabilities for organizational survival and growth.

Outline of this Thesis

Based on the theoretical and empirical evidence presented in the previous sections, this thesis contains three empirical studies with the purpose of understanding how learning is an important component to health and resilience in organizations. Specifically, and based on the HERO Model, it aimed to address learning from the individual (i.e., motivational dispositions to acquire mastery and skills in achievement situations), team (i.e., team learning, learning leadership) and organizational levels (i.e., HR learning practices); and examine how these learning capabilities and resources promote well-being (i.e, psychological capital, satisfaction, resilience) and performance. The foundational premise is that organizations should promote learning at the individual, team and organizational levels to maintain optimal levels of functioning and to be resilient in turbulent times. This thesis contains three chapters of empirical studies and one chapter of general conclusions. The empirical investigations were intended to answer the questions presented in Table 1.

Table 1.

Research questions

	Chapters		
	2	3	4
Question 1: How do healthy organizational practices promote learning environments in organizations to achieve healthy, resilient and better outcomes?			
<i>Question 1.1:</i> How is leadership intellectual stimulation related to team learning?		X	
<i>Question 1.2:</i> What is the role of HR learning practices (e.g., abilities and career development) in the development of team resilience and performance?			X
Question 2: Are positive psychological resources important to learning?			
<i>Question 2.1:</i> What is the role of team positive affect in the promotion of team learning?		X	
<i>Question 2.2:</i> What is the role of psychological capital as a positive motivational mechanism to link learning goal orientation and psychological well-being and performance?	X		
<i>Question 2.3:</i> Is learning goal orientation a possible antecedent of PsyCap?	X		
Question 3: How can organizations promote healthy employees and teams to promote learning?			
<i>Question 3.1:</i> Is leadership intellectual stimulation related to positive affect in teams?		X	
<i>Question 3.2:</i> Are team learning and HR learning practices facilitators of team resilience?			X
<i>Question 3.3:</i> Do learning goal oriented individuals perform and feel better?	X		

Chapter 2: Learning at the Individual Level

Based on the achievement goal orientation theory, this first study investigates the mediating role of psychological capital (PsyCap) in the relationship between learning goal orientation (LGO), academic satisfaction and performance among college students. Theoretical models and empirical research sustain that LGO is related to performance in work and academic settings. Since LGO is a more stable, trait-like tendency, many have suggested that other states, motivational and self-regulatory constructs may explain the relationship with performance and psychological well-being outcomes. Consequently, this empirical research was intended to answer the following questions: (1) *Do learning goal oriented individuals perform and feel better?* (2) *What is the role of psychological capital as a positive motivational mechanism to link learning goal orientation and psychological well-being and performance?* (3) *Is learning goal orientation a possible antecedent of PsyCap?* The study suggests that PsyCap may be a mechanism through which learning-oriented students are more satisfied and more productive in achievement situation. The study was conducted among 768 university students from a university in Spain. This study used self-reported data from students, as well as, archival data of performance (i.e., GPA) collected at different moments in time.

Chapter 3: Learning at the Team Level

The second study investigates learning at a team level. It aims to address some triggers of team learning in organizations. This research pretends to answer the following questions: (1) *How is leadership intellectual stimulation related to team learning?* (2) *Is leadership intellectual stimulation related to positive affect in teams?* (3) *What is the role of team positive affect in the promotion of team learning?* Specifically, this study

investigates how leadership intellectual stimulation relates to team positive affect and team learning. More specifically, the study explores the role of positive affect as a mediator between leadership intellectual stimulation and team learning. A particular dimension of transformational leadership is used in this study, considering that it is among the most understudied dimensions and the most connected to learning. Based on the broaden-and-build theory (Frederickson, 2001), the study suggests that positive affective states enlarge capacities to generate new ideas, increase alternatives for action, improve member connectivity and contribute to the overall well-being. This study was conducted at the team level using 562 employees nested in 130 teams from 44 small and medium size organizations in Spain.

Chapter 4: The Importance of HR Learning Practices

The third study investigates learning at the team and organizational level considering how HR learning practices and team learning relates to team resilience and performance. The specific research questions for this empirical study were: (1) *What is the role of HR learning practices (e.g., abilities and career development) in the promotion of team resilience and performance?* (2) *Are team learning and HR learning practices facilitators of team resilience?* Based on the HERO model and the propositions from Lengnick-Hall et al. (2001), the study proposed that HR learning practices are crucial for building resilience capacity in organizations. This study first examines the mediation role of team resilience between team learning and performance. Secondly, it explores the cross-level interaction effect of HR learning practices in this mediation. To test this model, a multilevel moderated-mediation analysis was conducted using 825 employees nested in 200 teams from 56 organizations in Spain.

Chapter 5: General Conclusions

This chapter presents an integration of the main conclusions from the empirical studies in this thesis. The main contributions and practical implications for the study of healthy and resilient organizations are presented. In addition, limitations from the current studies are discussed along with future avenues for research in the development of healthy and resilient learning organizations.

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CHAPTER 2**Learning goal orientation and psychological capital: A pathway to satisfaction and performance in college students****Abstract**

Based on the achievement goal orientation theory, this study investigated the mediating role of psychological capital (PsyCap) in the relationship between learning goal orientation (LGO) academic satisfaction and performance among college students. Findings of this study suggest that PsyCap may be a mechanism through which learning-oriented students are more satisfied and more productive in achievement situation. The study was conducted with a sample of 768 university students from a university in Spain. Results show that learning goal orientation strongly relates to PsyCap and this, in turn, significantly contributes to explain academic performance and satisfaction. Also, LGO contributes directly to explain performance and satisfaction, while PsyCap partially mediates the relationship between LGO and academic satisfaction and performance. These results highlight the relevance of positive education through the investment in psychological factors as a way to increase performance and well-being among university students.

Keywords: Academic satisfaction, Performance, Goal orientation, Psychological capital

Introduction

Traditionally, universities have focused on retention, academic achievement and performance as primary strategic goals. Although this goal remains relevant for higher education institutions, a new approach has emerged in which the development of positive psychological resources, such as personal strengths, competencies and psychological well-being are important goals for academic success. Hence, a positive education is defined as “the development of educational environments that enable the learner to engage in established curricula in addition to knowledge and skills to develop their own and others’ well-being” (Oades, Robinson, Green, & Spence, 2011, p. 432). Universities learning environments provide challenging and goal achievement situations aimed for students’ professional and personal development. However, high rates of stress, depression and anxiety are continuously reported among college students (Posselt & Lipson, 2016; Stallman, 2010) who need to develop appropriate coping strategies to maintain their performance and psychological well-being levels (Gram, Jæger, Liu, Qing, & Wu, 2013; Meneghel, 2014). This raises the question on how to develop positive capacities on college students to thrive and cope with increasingly demanding academic contexts. Based on this idea, and taking into account the positive education proposals, the understanding of the processes that explain academic satisfaction and performance remain relevant (Riolfi, Savicki, & Richard, 2012).

In challenging learning and academic situations, goal orientation theory provides a framework on how individuals define and strive for success; more specifically, it defines dispositional or situational goal preferences in achievement situations. Learning goal orientation (LGO) refers to an individual desire to develop the self by acquiring new

skills, mastering new situations and improving one's competence (Vandewalle, 1997). Theoretical and empirical research consistently support that LGO is related to performance in work and academic contexts particularly under certain learning environmental conditions (Huang & Luthans, 2015; Payne et al., 2007; Taing, Smith, Singla, Johnson, & Chang, 2013). On the contrary, results of performance goal orientation (PGO), which focus on demonstrating competence and gaining favorable judgments from others, and its relationship with performance has been less consistent (Payne et al., 2007).

Since goal orientation is a more stable, trait-like individual difference characteristic, many have suggested that other states, motivational and self-regulatory constructs, may explain its relationship with performance and psychological well-being outcomes (Payne et al., 2007; Vandewalle, Cron, & Slocum, 2001). These variables play a key role in directing and sustaining task-related efforts, explaining distal consequences of LGO such as academic performance (Payne et al., 2007). Recently, Huang and Luthans (2015) provide evidence that psychological capital (PsyCap) partially mediates the relationship between LGO and creativity.

Psychological capital is an individual's positive psychological state of development that is characterized by self-efficacy, optimism, hope and resiliency (Luthans et al., 2007). PsyCap has been extensively studied among employees and research has provided evidence of its added value for performance and satisfaction (Avey, Luthans, & Youseff, 2010; Avey, Reichard, Luthans, & Mhatre, 2011; Luthans et al., 2007). Drawing from the positive organizational behavior literature, PsyCap has been studied on educational settings among college students showing relationships with

engagement, motivation, and well-being (Datu & Valdez, 2016; Siu, Bakker, & Jiang, 2014; Riolli et al., 2012).

Although the benefits of PsyCap have been extensively reported and highlighted, less is still known about antecedents (Avey, 2014). Recent research has found that individual differences (i.e., self-esteem, self-concept) predict PsyCap beyond and above demographics characteristics and external antecedents (i.e., leadership and job complexity) (Avey, 2014). Thus, we propose that learning goal orientation relates to PsyCap, and, in turn, this positive psychological state provides a motivational mechanism which helps to explain distal consequences of LGO, namely satisfaction and performance (Payne et al., 2007).

The purpose of this study is to investigate the mediating role of PsyCap in the relationship between LGO and academic satisfaction and performance among college students. We aimed to explore PsyCap as a motivational mechanism through which learning-oriented students are more satisfied and more productive. In particular, we explore the indirect effect of LGO on academic satisfaction and performance through PsyCap. This study adds at least three key dimensions to extant literature: (1) it considers additional antecedents of PsyCap, since until recently few studies have considered its antecedents (Avey, 2014; Avey et al., 2011; Luthans, Yousseff-Morgan, & Avolio, 2015); (2) it extends and integrates literature on positive organizational behavior to academic context in order to promote well-being and academic success; (3) it examines the role of a potential positive psychological state through which students can sustain effort in academic achievement situations.

Learning Goal Orientation

Goal orientation theory derives from education literature and refers to dispositional motivational tendencies that describe individual preferences on achievement situations (Dweck, 1986; Elliot & Dweck, 1988; Vandewalle et al., 2001). Initially two dimensions were conceptualized: learning and performance goal orientations, which were associated with different beliefs about ability and effort (Elliot & Dweck, 1988). Vandewalle (1997) distinguished three dimensions, arguing that performance goal orientation encompasses the desire to gain favorable judgments and the desire to avoid unfavorable judgments about one's abilities. Following this conceptualization, he defined three goal orientations: (1) learning goal orientation, which refers to a focus in developing one's competence by acquiring new skills, mastering new situations and learning from experience, (2) proving goal orientation, which focuses on demonstrating one's competence and the gaining of favorable judgment from others, and (3) avoiding goal orientation, which refers to avoiding negations of one's competence and the avoiding of negative judgment from others. Meta-analytical research sustain that the three-dimension model of goal orientation explains more additional variance of academic performance than the two-dimension model, and provide evidence of its stability over time (Day, Yeo, & Radosevich, 2003; Payne et al., 2007). Moreover, research has established the relationship among these dimensions, which initially were understood as being unrelated and with different relationships to various outcomes (Dweck, 1986). Thus, LGO was found to have a low relationship with proving goal orientation and a negative relationship with avoiding goal orientation (Payne et al., 2007).

Since learning goal orientation reflects a desire to develop the self by acquiring

new skills, mastering new situations, learning from experience and improving one's competence (Vandewalle, 1997), this dimension is related favorably and consistently to performance, motivation and psychological well-being in work and academic settings, even beyond and above cognitive abilities and personality traits (Payne et al., 2007). The difference on performance outcome among goal orientation dimensions has been attributed to individuals' belief of malleability and trainability of skills. Those individuals who perceive skills and abilities as changeable and developable tend to adopt a learning goal orientation (Dweck & Lagget, 1988; Taing et al., 2013). For example, Utman (1997) found in a meta-analytical investigation that learning goals relate to better performance in complex tasks than to performance goals. Payne et al. (2007) reported that individuals with high LGO are likely to learn more and perform better.

Individuals high in learning goal orientation are more willing to pursue challenging tasks and goals, are more motivated to learn (Colquitt & Simmering, 1998, Klein, Noe, & Chang, 2006) and better adapted (Pintrich, 2000). In a longitudinal study, Taing et al. (2013) found that learning goal orientation was associated with setting higher goals and maintaining higher performance over time. This may explain, in part, the results presented by Van Dierendonck and van der Gaast (2013), who found that mastery goal orientation among college students (i.e., LGO) is associated to subjective career success. They suggest that since the focus is on learning, it fosters attitudes towards continuous improvement, which prepares professionals to better deal with failures in early career stages.

Although most research has concentrated on performance, learning goal orientation outcomes go beyond goal setting, effort, and performance (Taing et al., 2013;

Vandewalle et al., 2001). Learning goal orientation has been also related to self-efficacy, motivation, enjoyment, psychological well-being and satisfaction (Janssen & Van Yperen, 2004; Lee, Sheldon, & Turban, 2003; Payne et al., 2007; Sideridis, 2006). Learning goal oriented individuals have an intrinsic interest in the task at hand, exert great effort and perceive more control of the situations (Albert & Dahling, 2016; Janssen & Van Yperen, 2004), which may lead to positive affect and satisfaction toward the outcome. Roebken (2007) conducted a study to examine the relationship between student goal orientation and student satisfaction, academic engagement, and achievement among undergraduates' college students. Results showed that students who exhibit higher mastery goal orientation (LGO) expressed more satisfaction with the overall academic experience and had a higher academic performance (i.e., GPA). Considering the previous theoretical and empirical findings, we hypothesize that:

Hypothesis 1: Learning goal orientation is positively related to academic performance.

Hypothesis 2: Learning goal orientation is positively related to academic satisfaction.

The Mediating Role of Positive Psychological Capital

Psychological capital is defined by Luthans et al. (2007) as:

[...] an individual's positive psychological state of development characterized by (1) having confidence (self-efficacy) to take on and put the necessary effort to succeed at challenging tasks; making a positive attribution (optimism) about succeeding now and in the future; (3) persevering towards goals, and when

necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success (p. 3).

According to Luthans et al. (2007), psychological capital represents an individual motivational propensity, which helps to sustain action and lead to performance. Thus, psychological capital will be important to sustain action in challenging situations where individuals' disposition is to learn and develop their competences.

Research has shown that each psychological capital component relates to favorable attitudes and performance outcomes. A recent meta-analysis, for example, revealed a relationship between hope, performance, and psychological well-being among workers (Reichard et al., 2013). Previous research suggests that hope relates to performance, less turnover, higher commitment, happiness, and satisfaction (Larson & Luthans, 2006; Luthans et al., 2005; Peterson & Luthans, 2003; Youseff & Luthans, 2007). Optimism is associated with a realistic attribution of events and an evaluation of what an individual can or cannot achieve in a certain situation (Luthans, 2002). This realistic optimism about the situation is linked to efficacy beliefs and individuals' levels of resiliency (Luthans et al., 2007). Evidence suggests that optimistic individuals are more satisfied, happier and perform better (Luthans et al., 2005; Youseff & Luthans, 2007). Resilience, as a psychological capacity to rebound from adversity and conflict (Luthans, 2002) is related to learning (Contu, 2002; Varela-Díaz, Kelcey, Reyes, Gould, & Sklar, 2013), satisfaction, commitment and happiness (Youseff & Luthans, 2007) as well as performance at the individual and team levels (Luthans et al. 2005; Meneghel, Salanova, & Martinez, 2016). Finally, Stajkovic and Luthans (1998) expressed that self-efficacy

“mobilize motivation, cognitive resources or course of action needed to successfully execute a specific task” (p. 66). Thus, individuals with high levels of efficacy maintain effort and persistence (Zeldin & Pajares, 2000), leading to performance improvements and goal attainment. In addition, self-efficacy has been found to significantly predicts engagement, satisfaction and academic performance (Ouweneel, Le Blanc, & Schaufeli, 2011; Salanova, Martinez, Bresó, Llorens, & Grau, 2005; Sánchez-Cardona, Rodríguez-Montalbán, Acevedo Soto, Nieves-Lugo, Torres-Oquendo, & Toro-Alfonso, 2012).

As showed by previous empirical evidence, each individual component of psychological capital is strongly linked to positive consequences in terms of performance outcomes and psychological well-being (i.e., satisfaction, engagement, commitment). Although the vast majority of evidence is mostly related to the workplace (Avey, Luthans, Smith, & Palmer, 2010; Avey et al., 2011), the influence of psychological capital on positive individual and academic success outcomes have been strongly highlighted in previous empirical literature (Luthans, Luthans, & Avey, 2014; Luthans, Luthans, & Jensen, 2012; Ouweneel et al., 2011; Siu et al., 2014). Moreover, there is an increasing interest on this construct in a broad range of scenarios (Lorenz, Beer Pütz, & Heinitz, 2016).

Thus, it is expected that students with high levels of psychological capital will be able to evaluate positively challenging circumstances and realistic successful possibilities based on motivational persistence and effort, as well as a sense of agency and control (Yousef & Luthans, 2007; Yousef-Morgan & Luthans, 2015). Students will be capable to identify goals and pathways to achieve them as well as to be confident in their own abilities to accept challenging situations and to put effort and be persistent, with a

realistic attribution of what can be accomplished to succeed. In addition, under adversity or challenging situations, they have the capacity to bounce back. Moreover, as suggested by Luthans et al. (2007), by considering psychological capital as a whole, instead of its individual components, the motivational effect will broaden and will have more impact. For example, Riolli et al. (2012) found that PsyCap mediated between stress and psychological and physical well-being, and it increased students' satisfaction with life. Thereby, PsyCap as a whole positively predicts academic engagement and academic happiness (Datu & Valdez, 2016; Siu et al., 2014).

Interventions to develop such positive psychological states have gained considerable attention and findings provide promising avenues for the academic context (Dello Russo & Stoykova, 2015, Luthans et al., 2010; Luthans, Luthans, & Avey, 2014). For example, Luthans et al. (2014) presented initial evidence of the effect of a short training intervention on academic psychological capital among business students. Compared to the control group, the intervention group reported higher levels of PsyCap at the end of the intervention, even after controlling for the level of PsyCap at the beginning of the training program. Dello Russo and Stoykova (2015) found significant increases in PsyCap levels after an intervention on university students, remaining stable after one month. Based on the previous findings on PsyCap at the academic and organizational context, we proposed that:

Hypothesis 3: Psychological capital is positively related to academic performance.

Hypothesis 4: Psychological capital is positively related to academic satisfaction.

Literature asserts that much of the research has concentrated on the consequences of positive PsyCap (Avey, 2014; Avey et al., 2011), providing less evidence of what has been called “the left side” or antecedents of psychological capital. Avey (2014) addressed this gap by studying possible antecedents. Based on previous evidence, he identified four major categories: trait-like individual differences, leadership, job design, and demographics. Results suggest that individual differences, specially self-esteem, as well as task complexity and leadership, were the strongest predictors of psychological capital.

Bearing in mind these findings from Avey (2014), we propose that learning goal orientation as a dispositional trait, more specifically, as an achievement motivational trait (Payne et al., 2007) relates to psychological capital. In addition, research has suggested that other states, motivational and self-regulatory constructs, may explain the relationship between goal orientation and performance and psychological well-being (Payne et al., 2007; Vandewalle et al., 2001). We propose that psychological capital plays a key role in directing and sustaining task-related efforts, explaining distal consequences of LGO such as academic performance and satisfaction (Payne et al., 2007). Psychological capital, as a state-like construct, is one of such motivational and action mechanisms that research sustains it may be developed and enhanced, leading to psychological well-being and performance improvements. It is a well-established set of positive psychological resources related to completing a task or reaching a goal. In addition, psychological capital has been hypothesized to empower students with the necessary psychological resources to cope up with adverse circumstances (Riollu et al., 2012).

Recently, Huang and Luthans (2015) examined the link between learning goal orientation and psychological capital to explain creative outcomes. They stated that

learning goal orientated individuals “tend to draw from their positive psychological states through their course of action in the task environment” (p. 450). In this research they found a significant relationship between LGO and PsyCap. Interestingly, this link was moderated by learning behaviors, showing that the relationship was stronger in teams with low learning behavior. In addition, PsyCap partially mediates the relationship between LGO and creativity. This indirect effect was also mediated, suggesting that LGO indirectly affected creativity through PsyCap at moderate and low levels of team learning behaviors. This suggests, on one hand, the relevance of psychological capital as a mechanism to link learning goal orientation and performance outcomes, as well as the relevance of environmental conditions (i.e., lack of learning behaviors) in which the evaluation of goal orientation plays a key role in sustaining motivational mechanisms of performance.

Learning goal-oriented individuals show greater effort and persistence towards achieving a certain goal (i.e., hope) as well as confidence in their abilities under the achievement situation (i.e., efficacy) (Payne et al., 2007). Huang and Luthans (2015) also stated that learning goal-oriented individuals “are likely to develop and draw from their efficacy beliefs and optimistic expectation through past experience in successfully handling current challenges, risks, and demanding tasks” (p. 450). For instance, if learning goal-oriented individuals have difficulties attaining certain goals, it is perceived as a temporary setback, one that they have not yet learned how to overcome (Taing et al., 2013). Vandewalle et al. (2001) suggested that a strong learning goal orientation helps foster resilience. Hence, individuals with high learning goals may frame failures as temporary setbacks, until they develop the skills and abilities to master the situation.

LGO is useful in allowing individuals to prepare themselves to better deal with problems and to cope with the obstacles between them and their goals (Van Dierendonck & van der Gaast, 2013). Based on the above, we proposed the following hypothesis:

Hypothesis 5: Psychological capital mediates the relationship between learning goal orientation and academic satisfaction and performance.

Method

Sample and Procedure

The sample of this study consisted of 768 students from a university in Spain. The sample was stratified and belonged to four colleges: Humanities and Social Science (33.2%), School of Technology and Experimental Sciences (25%), Law and Economics (24.3%), and Health Sciences (17.4%). Participants were mainly females (59%). Most of the participants (93%) were enrolled in an undergraduate program (Bachelors' Degree) and 84% of participants were not working at the time of the study.

The sample was recruited by visiting classrooms with professors' consent through the different university colleges. Students received a brief presentation of the study by the researchers. Participation was voluntary and students were explained that the information was confidential and only aggregated data would be reported. Participants completed an individual paper and pencil questionnaire on academic well-being. In a separate page, in front of the questionnaire, students could voluntarily provide their identification number and signed an authorization form, in order to grant the research team access to their academic grades reported by the University at the end of the second exam session.

Measures

Learning goal orientation. We measured Learning Goal Orientation by adapting 4 items from the 13-item goal orientation scale developed by Vandewalle (1997). Some example items are: “I’m willing to enroll in a difficult course if I can learn a lot by taking it”, and “I truly enjoy studying for the sake of learning”. All items were answered using a 7-point Likert type scale ranging from 0 (*strongly disagree*) to 6 (*strongly agree*). Cronbach alpha coefficient for this study was .74.

Psychological capital (PsyCap). Psychological capital was measured using an adapted brief version of the Psychological Capital Questionnaire (PCQ) of 12 items. The original PCQ is comprised of 24 items (Luthans, Avolio, & Avey, 2007). PsyCap is conceptualized as a higher order construct consisting of four subscales measuring hope, optimism, efficacy and resilience. Each subscale included 4 items, which were responded using a 7-point Likert type scale ranging from 0 (*strongly disagree*) to 6 (*strongly agree*). The scale items were drawn from established scales previously published: 4 items for Hope (Snyder et al., 1996), efficacy (Parker, 1998), resiliency (Wagnild & Young, 1993), and optimism (Scheier & Carver, 1985). Some example items included in the scale were: “*I feel confident in representing my ideas concerning my studies*” (efficacy); “*I can think of many ways to reach my current goals regarding my studies*” (hope); “*I can get through difficult times at school because I’ve experienced difficulty before concerning my studies*” (resilience); “*I always look on the bright side of things regarding my studies*” (optimism). The Cronbach alpha coefficient for the PsyCap measure in this study was .80, and reliability estimates for each dimension were: .76 (hope), .69 (self-efficacy), .42 (resilience) and .60 (optimism).

Academic satisfaction. Academic satisfaction was measured with a four-item scale

that considers different aspects of students' academic life: their professors, the degree they are enrolled in, the college to which they belong to and the university. An item example is: "*How satisfied are you with your professors?*". All items were answered using a 7-point Likert type scale ranging from 0 (*totally disagree*) to 6 (*totally agree*). Cronbach alpha coefficient for this study was .72.

Academic performance. Academic performance was assessed using the grade point average (GPA) provided by the university, with consent from participants, at the end of the second exam session after the data collection (T2). This data reflected the GPA approximately 4 to 5 months after the data collection was completed. GPA ranged from 5 (poor performance) to 10 (excellent performance).

Data Analysis

Prior to analysis, all variables were examined for accuracy, missing data and multivariate assumptions. To test our hypothesized model, we selected only those cases with data on academic performance, excluding 189 participants. Missing values on all other variables were less than 2%, thus, mean replacement was conducted considering that such low proportion of missing data did not produce biased statistics estimates and standard error (Tabachnick & Fidel, 2013). Multivariate outliers were identified through Mahalanobis distance ($p < .001$), which revealed 7 outliers. In order to ascertain the impact of these outliers in our data, analyses were conducted with and without these cases (Aguinis, Gottfredson, & Joo, 2013). No critical differences were found on the estimates between both set of analyses; consequently, we decided to include all cases in the analysis. We also performed visual plotting of the data and inferential test for normality (Tabachnick & Fidel, 2013). Results suggest that data does not meet

multivariate normality (Mardia Skewness=1.285, χ^2 (20) = 165.461, $p < .001$); nonetheless, according to Darlington and Hayes (2017), unless extreme violations, “normality assumption is one of the least important assumptions of regression for most of the widespread uses” (p. 498).

After inspection of the data set, we proceeded to conduct descriptive, correlational analysis, and path analysis using STATA vs. 14. In addition, we conducted analysis of variance (ANOVA) to examine any differences in the study variables between colleges. We used $p < .05$ in all analysis.

In order to assure common method bias was not an issue in this data set, considering most measures were self-reported, we followed several methodological and statistical procedures as suggested by Podsakoff, Mackenzie, and Podsakoff (2012) and Spector (2006). First, we measured variables using different sources. In this case, predictors and mediator variables were self-reported measures and at least one outcome measure was collected from an objective source (academic performance). Secondly, we conducted a one-factor test confirmatory factor analysis to assure discriminant validity of the measures and established correlations among items and their respective constructs.

We analyzed the proposed model through path analysis using STATA vs. 14 maximum likelihood estimation method. Since all variables were considered as single unique constructs, and academic performance was an objective measure, we used manifest variables in the model (Meneghel, 2014).

The following absolute and relative goodness-of-fit indices were considered to evaluate model fit. We used the chi-square (χ^2), the Root Mean Square Error of

Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR). Values of RMSEA below .08 and .05 indicate a reasonable and good fit, respectively, and SRMR values lower than .08 are indicative of a good fit (Browne & Cudeck, 1993). In addition, we examined Comparative Fit Index (CFI), Incremental Fit Index (IFI), and Normed Fit Index (NFI). Values equal or higher than .90 indicate a good fit between the models (Hu & Bentler, 1999). Considering non-normality of our data, we also calculated robust corrected version of the Chi-Square ($S-B\chi^2$) and CFI proposed by Satorra and Bentler (2001).

Results

Preliminary Analysis

First, since most measures in this study were self-reported, and to examine if common method bias was an issue in this data set, a single factor Confirmatory Factor Analysis (CFA) was computed with items from all variables loading into a unique latent factor (Podsakoff et al., 2012). The single factor model showed poorer fit to the data (χ^2 (152) = 1597.714, RMSEA = .11, SRMR = .082, CFI = .66, NFI = .64, TLI = .61, IFI = .66, AIC = 1711.71), in comparison with a 3 factors model (χ^2 (145) = 859.50, RMSEA = .080, SRMR = .076, CFI = .83, NFI = .80, TLI = .80, IFI = .83, AIC = 949.51, $\Delta\chi^2$ (9) = 738.21, $p < .05$). This suggests that all measures correspond to a distinct, yet, related construct with significant correlation between factors ranging from .29 to .72.

We examined possible differences among colleges in the study variables to account for any variance explained by college before testing our model. There were no differences in the mean of psychological capital reported by students from different

colleges, $F(3,764)= .934$, $p= .424$, $\eta^2 = .004$. Significant differences were found in learning goal orientation, $F(3, 764)= 4.69$, $p= .003$, $\eta^2 = .018$. Post hoc analysis with Bonferroni revealed a statistical significant difference between the College of Health Sciences ($M= 4.26$, $SD= 0.96$), the Humanities and Social Science College ($M= 3.85$, $SD= 1.10$), the School of Technology and Experimental Sciences ($M= 3.94$, $SD= 1.07$), and College of Law and Economics ($M= 3.89$, $SD= 1.06$). However, the effect size of this difference was small (Cohen, 1988). Similar results were obtained with satisfaction. Results showed a statistical significant difference between colleges on the students' satisfaction, $F(3, 764)= 2.95$, $p= .032$, $\eta^2 = .011$. Nonetheless, post hoc analysis with Bonferroni did not revealed any statistical significant difference in the pairwise comparison. The effect size was also small. Finally, there was a statistical significant difference on academic performance between faculties, $F(3, 764)= 34.449$, $p< .001$, $\eta^2 = .12$. Post hoc analysis using Bonferroni revealed that most colleges differ statistically on their students' academic performance. Only the Humanities and Social Science College ($M= 7.22$, $SD= 0.68$) and the College of Health Sciences ($M= 7.22$, $SD= 0.75$) did not differ statistically and both represented the highest scores on academic performance. Overall, no consistent differences among groups were found on the predictors and outcomes, besides academic performance. Consequently, further analyses were not conducted by groups.

Model Fit

Table 1 presents the correlations among the study variables. All correlations were positive and in the expected direction. Since all variables were considered as a unique

construct, and considering GPA was an objective measure, we used manifest variables in the model.

Table 1.

Descriptive analysis of the variables in the study (n = 768)

	<i>M</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>
1. Learning Goal Orientation	3.95	1.07	(.76)		
2. Psychological Capital (PsyCap)	4.03	.81	.547**	(.80)	
3. Academic Satisfaction	3.78	.67	.266**	.371**	(.72)
4. Academic Performance	7.02	.77	.238**	.201**	.152**

Note: All correlations are significant at $p < .01$. Coefficient alpha reliability estimates are listed in the diagonal in parentheses.

First, a complete mediation model of PsyCap in the relationship between LGO and academic satisfaction and performance was estimated showing poor fit to the data (see Table 1). Thus, the model was re-estimated allowing direct paths from LGO to academic satisfaction and performance. Results showed that the proposed model had a good fit and it is significantly better than the first model ($\Delta\chi^2(2) = 24.233, p < .001$). Learning goal orientation relates significantly to PsyCap ($\beta = .55, p < .001, R^2 = .30$) and in turn, PsyCap contributes significantly to explain academic performance ($\beta = .10, p < .05$) and satisfaction ($\beta = .32, p < .001$). As well, LGO showed a statistically significant direct effect on academic performance ($\beta = .18, p < .05$) and satisfaction ($\beta = .09, p < .05$) (see Figure 1).

Results showed that PsyCap partially mediates the relationship between academic satisfaction and performance. We conducted a bias corrected percentile method with

1000 bootstrap samples to calculate confidence intervals of indirect effects (Cheung & Lau, 2007). We used the standardized indirect effect, which has been called as an “index of mediation” (Preacher & Hayes, 2008). Indirect effect of LGO on academic satisfaction through PsyCap was statistically significant (Indirect effect=.176, SE = .026, 95% CI [.123, .231]). In addition, LGO indirect effect through PsyCap on academic performance was also statistically significant (Indirect effect=.055, SE = .022, 95% CI [.003, .094]). The model explains 14% of the variance of academic satisfaction and 6% of academic performance (GPA).

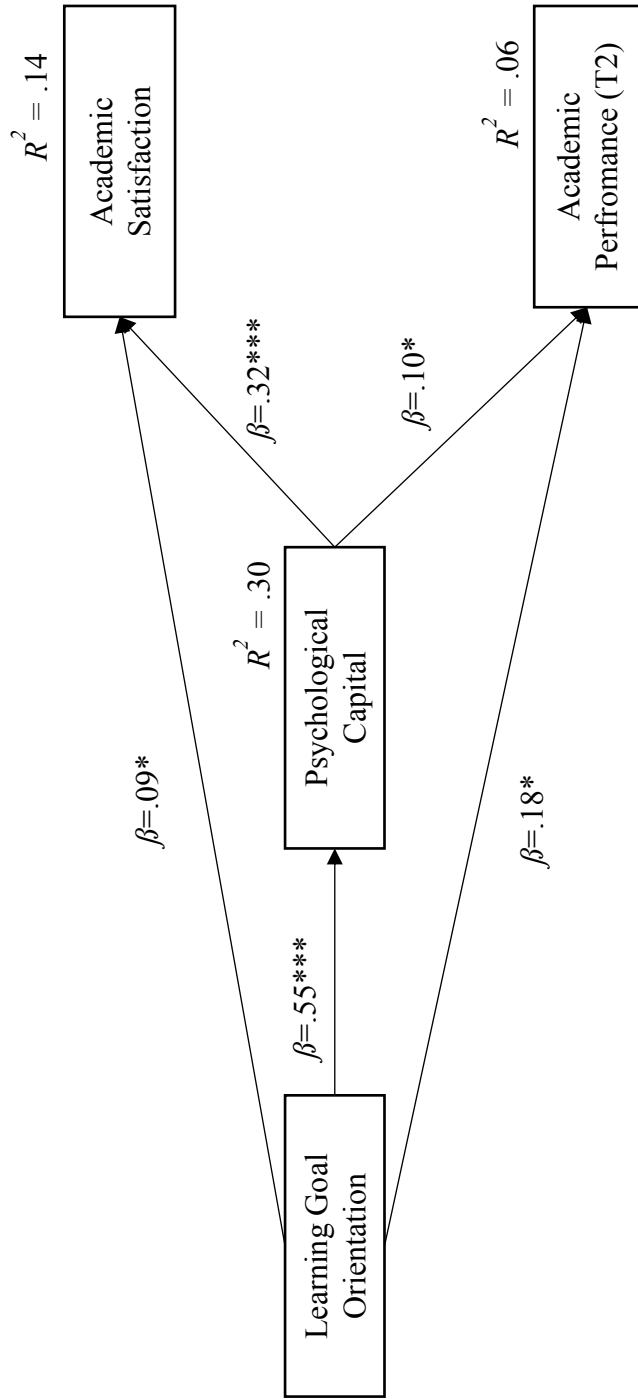


Figure 1. Final path analysis model with standardized estimates

Table 2.

Path analysis fit indices (n = 768)

Model	χ^2	df	p	S-B χ^2	RMSEA	RMSEA 95% IC	SRMR	NFI	IFI	TLI	CFI	*CFI	AIC	$\Delta\chi^2$	Δdf
M1 (Full mediation model)	28.41	3	.000	25.65	.105	.072-.142	.052	.94	.94	.89	.94	.99	50.382		
M2 (Partial mediation model)	4.15	1	.042	4.078	.064	.010-.133	.021	.99	.99	.95	.99	.99	30.149	24.26***	2

Note. χ^2 = Chi-square; df = degree of freedom; S-B χ^2 = Satorra-Bentler chi square; RMSEA = Root Mean Square Error of Approximation; SRMR= Standardized root mean square residual; NFI = Normed Fit Index; IFI = Incremental Fit Index; TLI = Tucker-Lewis Index; CFI = Comparative Fit Index; *CFI= Robust version of the Comparative Fit Index; AIC= Akaike Information Criterion; $\Delta\chi^2$ dif = difference in chi square. *** $p < .001$

Discussion

The aim of this study was to examine the mediation role of psychological capital on the relationship of learning goal orientation, academic satisfaction and performance in a sample of 768 college students. Results show that learning goal orientation significantly predicts satisfaction and performance among Spanish college students. This is consistent with results previously reported in the literature, in which learning goal orientation is consistently related to better performance in comparison with proving and avoiding goal orientation (Johnson, Shull, & Wallace, 2016; Payne et al., 2007; Vandewalle et al., 2001). Learning goal oriented individuals strive to improve their competences to master skills to goal attainment, and are more willing to take risks, make mistakes and ask for feedback. In the academic context, this disposition seems crucial to develop the necessary competencies to improve academic success. Achievement situations and goals in academic contexts are aligned with learning objectives, thus, it is plausible that learning goal orientation facilitates the process to goal attainment in terms of academic achievement. In relation to well-being, successfully improving competencies, as well as desire in their motivational orientation, will lead to satisfaction and positive psychosocial outcomes. When individuals fulfill their psychological needs they increase their well-being (Ryan & Deci, 2000).

This in turn leads us to suggest that learning goal orientation also relates with psychological capital. Indeed, learning goal orientation significantly predicted PsyCap among college students. Moreover, the indirect effect of PsyCap between learning goal orientation and satisfaction and performance was significant. This suggests a mechanism through which LGO and academic performance and satisfaction are linked. Previous recommendations suggest that other motivational and self-regulatory constructs may play a key role linking learning goal

orientation with performance and well-being outcomes (Johnson, Shull, & Wallace, 2016; Payne et al., 2007; Vandewalle et al., 2001). Psychological capital as a proactive and motivational mechanism may help to complete a task or reach a goal and provide students with psychological resources to cope up with adverse circumstances (Riulli et al., 2012), thus, it leads to better performance and satisfaction among those individuals whose disposition is towards learning and mastering skills in achievement situations.

This is in line with previous literature that consistently relates psychological capital to positive outcomes (Avey et al., 2010; Ouweneel et al., 2011; Riulli et al., 2012). Results coincide with findings reported by Huang and Luthans (2015), who found a significant indirect effect of psychological capital between the relationship of LGO and creative performance. These results provide additional avenues for research and practice suggesting alternative developable psychological mechanisms to improve performance and well-being among college students. Previous research has explored these possible mechanisms through variables such as persistence, effort and efficacy, but the added value of a positive psychological capital has receive little attention.

Theoretical Implications

Deriving from positive organizational behavior literature (Luthans, Avolio, & Youssef, 2007), we explored psychological capital as a mechanism that explains the link between individual dispositions (e.g. learning goal orientation), and positive outcomes (e.g. performance and satisfaction). Results from this analysis add at least two theoretical contributions. First, it tested an additional individual difference antecedent of psychological capital. Literature has focused on outcomes of PsyCap, giving less attention to potential antecedents (Avey et al., 2011; Avey, 2014). Previous research highlights the contribution of individual differences, especially

self-core evaluations (i.e., self-esteem) and contextual factors (i.e., task, leadership). It seems that individual disposition plays a role in development of positive psychological states (Avey, 2014). Learning goal orientation is significantly related to PsyCap; thus, individuals with disposition to increment their mastery on skills and abilities will experience more hope, resilience, efficacy and optimism.

Second, and in line with previous assertions, PsyCap provides a motivational mechanism to explain LGO and positive outcomes relationships. These positive psychological states may be crucial, as motivational states, to sustain action, persistence, and effort in goal attainment improving and maintaining performance and well-being. Nonetheless, and although a significant indirect effect was found, additional possible motivational variables may mediate, alongside with PsyCap, this relationship. In addition, as other research has shown, LGO is strongly related to performance, particularly in learning contexts (Huang & Luthans, 2015). For example, the indirect effect of learning goal orientation to creative performance via PsyCap was stronger in contexts where team learning was low.

Practical Implications

The present study provides evidence for the development of positive psychological capital among college students. Psychological capital is an individual's positive psychological state of development. Indeed, the inclusion of psychological capital components were selected as open to development and opposed to fixed traits (Luthans et al., 2007). From a positive psychology perspective, intentional activities could be implemented aimed to cultivate positive feelings, behaviors and cognitions (Le Blanc & Oerlemans, 2016; Sin & Lyubomirsky, 2009). In accordance, some interventions programs have been implemented for the development of PsyCap to enhance positivity through short training interventions, and even web-based

methodologies (Luthans, Avey, & Patera, 2008). In college students, Luthans et al. (2014), tested an intervention to increment hope, optimism, resilience, and efficacy. Briefly, students identify a personally valuable and challenging goal for which they have to generate multiple pathways to reach those goals (hope). Further discussions incorporate new pathways and how to overcome possible obstacles (efficacy), which will lead to more optimism for the future success. As well, resilience is expected to be developed through deriving multiple pathways to accomplish these goals (Luthans et al., 2014). This short intervention proved to have a significant impact on the development of PsyCap. Even though evidence is still needed to test the effect of the intervention over time, recent evidence of such programs in academic setting suggests that significant increases in PsyCap levels remains stable after one month (Dello Russo & Stoykova, 2015).

These interventions should also consider possible antecedents of psychological capital. For example, Ouweneel et al. (2011) found that positive emotions, engagement and positive personal resources (hope, optimism and efficacy) are reciprocally related. These interventions, aimed to increment positive emotions and engagement among university student (Ouweneel et al., 2014), will possibly generate higher levels of psychological capital. This is in line with the proposal of positive education to develop personal capacities and well-being in academic contexts (Oades et al., 2011).

Considering the findings from this research, individual dispositions could play a key role as antecedent of PsyCap (Avey, 2014). Learning goal orientation showed to be a strong predictor of PsyCap. Educators should be aware of motivational orientations of their students to create educational challenges aligned with their goal orientation. Educators should create environments that value learning and development in order to motivate learning goal oriented individuals,

instead of emphasizing on grades and competition. This in turn could lead to increases in positive outcomes in terms of psychological capital, satisfaction and performance (Heled, Somech, & Waters, 2015). Nonetheless, it is also important to consider any possible boundary condition that can limit or enhance this link (Huang & Luthans, 2015).

Limitations and Future Research

Results obtained in this study should be interpreted taking into consideration certain limitations. First, the sample consisted of students from one university in Spain. Even though sample stratification guaranteed participation from all colleges, and preliminary analyses showed no differences on the majority of variables in this study between the colleges, future research should be conducted with a larger sample from diverse universities, colleges and educational levels to generalize these results. In addition, cross-cultural research should be conducted in particular to ascertain any possible sociocultural difference related to the development of PsyCap (Wernsing, 2014). Second, this study is cross-sectional in nature, consequently no causal inferences can be drawn from the results. Nonetheless, our model consisted on variables collected at two points in time, using self-reported and archival data. One of the dependent variables in our model (academic performance) was collected at a later point in time from students' university records. This provides a strength to our methodology suggesting a significant effect from learning goal orientation to academic performance over time. Still, longitudinal analyses are still needed to declare any causal link between LGO and PsyCap or positive outcomes. Additionally, separating data collection in time and using archival data contributes to limit some bias due to a common method (Podsakoff et al., 2003, 2012). Any possible bias due to a common method was also statistically verified through a one factor

confirmatory analysis using all self-reported measures as suggested by Podsakoff et al. (2003, 2012).

Finally, some may argue that the partial mediation model in this study constitutes a limitation; however, this is in line with previous results (Huang & Luthans, 2015) and it only suggests other possible mechanisms in the intricate relationship between goal orientation and positive outcomes. As previous studies found, persistence, goal attainment and efficacy beliefs are mechanisms to explain the link between goal orientation and outcomes (Johnson, Shull, & Wallace, 2011; Payne et al., 2007; Vandewalle et al., 2001). Combined with advancing research on learning goal orientation and psychological capital, additional motivational processes should be considered. For example, need satisfaction literature suggests that when basic psychological needs (i.e., competence, relatedness and autonomy) are satisfied, individuals reports greater well-being and functioning (Church et al., 2013). It might be possible that learning goal oriented individuals achieve better functioning if they fulfill their psychological needs. Even more, fulfilment of psychological needs is related to intrinsic motivation, and learning goal oriented individuals tend to have intrinsic motivation toward the tasks. In such cases, fulfilment of psychological needs and intrinsic motivation will contribute significantly to enhanced performance and well-being.

Conclusions

Consistent with previous studies, the present study presents a relationship between LGO, performance and satisfaction among college students. It also expands what has been previously studied on psychological capital as an explanatory mechanism of this relationship. Universities, more than ever, are increasingly aware of the advantages of creating healthy and safety places not only for employees but also for students. These results highlight the relevance of positive

education through the investment in psychological factors as a way to increase performance and well-being among university students. Universities should strive to become healthier, happier and more effective environments by creating new knowledge and positive capabilities.

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CHAPTER 3**How does team positive affect mediate leadership intellectual stimulation and team learning?¹****Abstract**

This study investigated how leadership intellectual stimulation relates to team positive affect and team learning. We explored the role of positive affect as a mediator between leadership intellectual stimulation and team learning. Using a cross-sectional sample of 562 employees, nested within 130 teams from 44 small and medium size organizations, we implemented Structural Equation Model analysis at the team level. Results provide evidence of the strong relationship that intellectual stimulation has on team learning and team positive affect, as well as the potential of positive affect to stimulate team learning. Team positive affect serves as a partial mediator between intellectual stimulation and team learning, contributing to explain significant additional variance. Leadership intellectual stimulation is a relevant team social resource that provides support for team learning. As well, positive affect contributes significantly to improve learning among teams. This suggests the importance of developing leadership behaviors that encourage learning and team positive affect, which contributes to team learning and hence to performance.

Keyword: Leadership intellectual stimulation, Transformational leadership, Team positive affect, Team learning

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Introduction

Nowadays, organizations strive to cultivate positive psychological states and behaviors within its workforce for adaptability and resiliency in turbulent times (Salanova, Llorens, Cifre, & Martínez, 2012). Salanova et al. (2012) proposed a heuristic model to explain the Healthy and Resilient Organization (HERO), which are those that proactively and continuously develop organizational practices and resources to promote healthy outcomes in individuals and teams that in turn lead to team and organizational effectiveness. From this perspective, leaders, as social resources, play an important role in organizations to shape team and organizational processes to improve effectiveness and well-being (Cruz-Ortiz, Salanova, & Martinez, 2012, 2013; Hannah & Lester, 2009). Transformational leaders are those who can inspire their followers, increment their maturity and motivation to go beyond their personal interest, having a direct impact on their colleagues' well-being and effectiveness (Cruz, Salanova, & Martinez, 2013). Leaders provide vision, inspirational communications, help their followers to see diverse perspectives and provide support and recognition (Bass, 1985; Rafferty & Griffin, 2004). On the contrary, transactional leaders focus mainly on followers meeting the expectations (Judge & Piccolo, 2004). The developmental and person-focused approach of transformational leadership behaviors are crucial for the optimization of team members' potentialities.

From the transformational leadership approach, intellectual stimulation is perhaps the most commonly understudied dimension (Rafferty & Griffin, 2004); nonetheless it may have a powerful impact on team process, such as team learning. Through intellectual stimulation, leaders continuously encourage team members to think and perform in new ways by challenging their own beliefs and supporting new and innovative ways of actions. Moreover, it is well known that leaders infuse positive psychological and affective states that help teams to increase in both

performance and well-being (Pirola-Merlo, Härtel, Mann, & Hirst, 2002; Salanova et al., 2012). Leadership research points that certain leadership behaviors have an effect over employees' optimism and enthusiasm (Bono, Foldes, Vinson, & Muros, 2007), affective commitment (Rafferty & Griffin, 2004), and it can help to create a positive team climate (Hernández-Baeza, Araya Lao, García Meneses, & González Romá, 2012). The broaden-and-build theory posits that positive affectivity (i.e., emotions) broaden peoples' modes of thinking and acting and builds enduring resources (i.e., cognitive, social) (Fredrickson, 2001; Sekerka & Fredrikson, 2008). Additionally, team positive affect has a significant influence on team dynamics, behaviors and performance (Collins, Lawrence, Troth, & Jordan, 2013). As suggested by Rafferty and Griffin (2004), intellectual stimulation may have an effect on the affective responses of team members (e.g., affective commitment) through the perception that leaders value their contribution and are concerned with the team development. Thus, intellectual stimulation may encourage team learning by infusing positive affect, which can contribute members to engage in collective learning.

The aim of this study was to examine how intellectual stimulation of leaders relates to team positive affect and team learning. In concrete, we explore the role of positive affect as a mediator between leadership intellectual stimulation and team learning. We based our propositions on the Healthy & Resilient Organization Model (HERO) (Salanova et al., 2012) which proposes that teams and organizations can develop their effectiveness and resilience through three interrelated blocks of variables: healthy organizational resources and practices, healthy employees, and healthy organizational outcomes. The model highlights the importance of social resources, such as leadership behaviors, which are relevant to increase the connections employees have with the people they work with. Moreover, this model postulates the

relationship of these interpersonal resources to promote both cognitive and affective psychological resources, which are crucial to develop healthy employees and outcomes. Based on this idea, we argue that team learning is one way to promote continuous improvement and performance in shifting times (Edmondson, 1999; Van Der Vegt & Bunderson, 2005) and that team leaders play a key role stimulating followers intellectually through team positive affect (Rafferty & Griffin, 2004).

Although previous evidence supports the role of leaders for team learning (Edmondson, 1999; Hetland, Skogstad, Hetland, & Mikkelsen, 2011), this study contributes to examine the role of a set of a leader behaviors related to learning activities (i.e., intellectual stimulation) at the team level (Morgeson, DeRue, & Karaman, 2010; Salanova et al., 2012). Our aim is to contribute to the scarce literature on the contribution of team positive affect on the team learning process, which has not been deeply addressed in empirical research, although theoretical propositions suggests that positive affect, and specifically emotions, can expand peoples' mode of thinking and enlarge their possibilities for action (Frederickson, 2001, 2003; Vacharkulksemsuk & Fredrickson, 2013).

Leadership and Team Learning

The role of leadership in facilitating learning efforts is fundamental within organizations. Leaders play a central role in encouraging learning, and offer the required guidance for organizations to integrate and sustain learning processes (Carmeli & Sheaffer, 2008; Edmondson, 2003; Song, Kolb, Lee, & Kim, 2012). More specifically, leadership behaviors aimed to encourage learning (i.e., intellectual stimulation) serve as a resource to promote a learning environment characterized by reflection, challenging ideas, and new ways of thinking and action (Edmondson, 1999, 2002, 2003). Team learning is a process through which team

members seek to acquire, share, refine, or combine relevant knowledge by interacting with one another, as well as to reflect upon feedback and make changes to adapt and improve (Edmondson, 1999).

Leaders promote team learning through diverse sets of behaviors such as questioning, providing information and solution exchange, stimulating curiosity, encouraging voice, promoting a culture for learning, helping to interpret situations in new ways, modeling new ways of thinking and action, providing coaching, being open to change, and developing mechanism for learning transfer (Carmeli & Scheaffer, 2008; Edmondson, 1999, 2003; Sarin & McDermott, 2003). From a unified leadership approach, transformational leadership approach is perhaps the most linked to team and organizational learning (Song, Kolb, Lee, & Kim, 2012).

Transformational leaders act as a social resource that inspires and motivates followers through the transformation of their attitudes, beliefs, and values, leading to performance and well-being improvements (Bass, 1985; Nielsen & Munir, 2009; Rafferty & Griffin, 2004). Transformational leadership is conceptualized as a multidimensional construct. Bass' (1985) transformational leadership theory identified the following dimensions: Charisma or idealized influence, Inspirational motivation, Intellectual stimulation and Individualized consideration. Rafferty and Griffin (2004) re-examine the theoretical model presented by Bass (1985) and suggest five sub dimensions of transformational leadership: (1) *Vision*, which refers to the expression of an idealized picture of the future based around value; (2); *Inspirational communication*, which refers to the expression of positive and encouraging messages about the organization and statements that build motivation and confidence; (3); *Supportive leadership*, which refers to leaders' expressions of concern for followers and consideration of their individual needs; (4) *Intellectual stimulation*, through which leaders enhance employees' interest

in, and awareness of problems, and increasing their ability to think about problems in new ways; and (5) *Personal recognition*, which refers to the provision of recognition and acknowledgement for goal achievement.

Even though extensive research has been conducted linking these person-focused leadership behaviors to team effectiveness, productivity, and positive affective states (Bono, Foldes, Vinson, & Muros, 2007; Burke, Stagl, Klein, Goodwin, Salas, & Halpin, 2006), few empirical studies have addressed the relationship between transformational leadership and team learning. Even more, most of the research on transformational leadership is conducted using a unique factor of transformational leadership. Nonetheless, as suggested by previous research, the study of particular leadership behaviors instead of focusing on multidimensional aspects of leadership is still needed (Burke et al., 2006; Nielsen & Munir, 2009). The study of one particular dimension of leadership allows for the development of specific organizational interventions to promote leaders' behaviors that improve specific employees' and teams' well-being states, development of capabilities, and therefore organizational outcomes (Nielsen & Munir, 2009).

Nielsen and Munir (2009), for example, suggested that "through intellectual stimulation leaders encourage followers to make their own decisions and be creative and innovative in their work and as such they may feel more challenged and thereby also more aroused" (p. 315). According to Rafferty and Griffin (2004), intellectual stimulation is perhaps the most underdeveloped component of transformational leadership; nonetheless, it encompasses a more focused and internally consistent set of behaviors. Intellectual stimulation provides a social resource through which team members are challenged and encouraged to think creatively,

experiment, participate and solve problems in their daily work (Rafferty & Griffin, 2004; Zhou, Hirst, & Shipton, 2012).

When leaders stimulate employees intellectually, team members are able to increase their awareness to problems, which allow them new ways of looking at old problems (Rafferty & Griffin, 2004). This suggests a meaningful relationship between leadership behaviors and perceptions of a learning-supporting context (Hetland et al., 2011). Through intellectual stimulation leaders can create an environment for questioning assumptions, differing perspectives, encouraging new ways of thinking, and suggesting new ways of seeing problems.

At the team level, Morgeson, DeRue and Karaman (2010) suggest that one important function of leaders concerns *challenging the team*, which involve “challenging teams with regard to their task performance and confronting the team assumptions, methods, and processes in an effort to find the best ways of accomplishing the team’s work” (p. 21-22). This leadership function is reflected in the intellectual stimulation sub-dimension of transformational leadership; however, traditionally this sub-dimension has been focused at the individual level, representing a limitation for the team level of analysis. In our study, we overcome this limitation rewording and adapting intellectual stimulation measure to focus at the team level using a referent shift consensus composition (Chan, 1998).

Leaders and Team Positive Affect

Leaders have an important influence over the affective well-being of their followers (Bono et al., 2007; Kelly & Barsade, 2001). Traditional influential theories of leadership, such as transformational leadership, include an emotional component. Leaders help to create shared emotional experiences that bond group members together and infuse performance. For example,

Hernández-Baeza et al. (2009) found that leadership charisma has a significant influence in fostering positive team climate and preventing negative affective climate.

In our study, we center the attention on intellectual stimulation as a leader behavior that potentially influences learning activities and processes in teams. When leaders encourage learning behaviors through intellectual stimulation, for instance, they can foster emotional contexts as well, which help to better functioning and to persevere under adverse circumstances (Fredrickson, 2003). Rafferty and Griffin (2004) found an unexpected relation between intellectual stimulation of leaders and affective commitment. They suggest that even though intellectual stimulation may provide employees with more role ambiguity and conflict, it is also a way through which leaders express value to team members' contributions. This sense of value may elicit affective states in employees encouraging them to actively engage in group processes and outcomes (Kelly & Barsade, 2001).

Team Positive Affect and Team Learning

Research shows that positive affect precedes desirable individual and team outcomes (Kelly & Barsade, 2001). Team affect, as a shared pattern of affective states of group members (Kelly & Barsade, 2001), has gained considerable attention since it promotes and derives valuable team dynamics and outcomes such as: coordination, cooperation, performance (Salanova et al., 2011) and organizational learning (Scherer & Tran, 2001; Vince, 2002).

In the workplace, positive affect may elicit better relationships among team members, as well as broaden the attention to the environmental context, thoughts and actions, encouraging novel ideas and deeds (Fredrickson, 2001; Vacharkulksemsuk & Fredrickson, 2013). Thus, emotional climate influences team and organization dynamics such as idea-generation, creativity,

adaptability to change, and facilitation or inhibition of learning process (Scherer & Tran, 2001). This expands the perspective in the study of team learning, which essentially focuses on aspects such as efficacy beliefs, trust and psychological safety (Edmondson, 1999; Edmondson, Dillon, & Roloff, 2007; Van der Vegt & Bunderson, 2005; Van den Bossche, Gijsselaers, Segers, & Kirschner, 2006).

Collective positive affect can transform organizations making its members more flexible, empathic and creative, contributing to organizational effectiveness and adaptation (Fredrickson, 2003). Theoretically, the broaden-and-build theory (Fredrickson, 2001) explains how positivity relates to well-being and the development of resources which help for adaptability and performance. Additionally, positive emotions broaden awareness as well as thinking and action repertoires. On the second hand, positive emotions contribute to build enduring cognitive, physical, social and relational resources (Salanova, Llorens, & Schaufeli, 2011; Vacharkulsemsuk & Fredrickson, 2013). In this sense, positive affective states enlarge capacities to generate new ideas, increase their alternatives for action, improve member connectivity and contribute to the overall well-being (Sekerka & Fredrickson, 2008; Vacharkulsemsuk & Fredrickson, 2013).

Previous research evidences the relationship of affective states (positive and negative) on several work outcomes. For example, Tsai, Chen and Cheng (2009) found that leadership indirectly influences performance and helping behaviors through positive moods. These results contribute to the scarce literature regarding the mediating role of positive affective states between leadership and performance outcomes. Positive affect has a great potential to foster strong social resources at work, but still more understanding is needed on what outcomes positive affect yields for the team (Vacharkulsemsuk & Fredrickson, 2013).

The current study aims to explore the role of intellectual stimulation and positive affect on team learning, giving particular attention to the role of positive affect between intellectual stimulation of the leader and team learning. Leaders can promote team learning through intellectual stimulation, and these intellectual challenging behaviors instill a positive affective context within teams. When intellectually stimulated, team members may feel that leaders are concerned with their growth and development, as well as interested in their contributions to the team, infusing positive affect among team members (Rafferty & Griffin, 2004). This collective positive affect may broaden thinking and build cognitive, social and relational resources, especially stronger ties among team members, fostering the sharing of ideas, reflection and questioning assumptions (Vacharkulksemsuk & Fredrickson, 2013). In this sense, leaders intellectually stimulate or challenge their teams to contribute to their learning process. These leadership behaviors may also relate significantly to team positive affect, which also contributes to explain why teams engage in team learning.

This study will contribute to the current literature examining how leaders and positive affect at the team level promote learning. Moreover, this exploration will provide evidence of the role of positive affect on the relationship between leadership intellectual stimulation and team learning, going a step further from the study of mediating variables centered only on interpersonal or cognitive states (e.g., efficacy, psychological safety, collaboration) (Edmondson, 1999; Edmondson et al., 2008; Van der Vegt & Bunderson, 2005; Van den Bossche et al., 2006). We propose the following hypotheses:

Hypothesis 1: Leadership intellectual stimulation will be positively related to team learning and team positive affect.

Hypothesis 2: Team Positive affect will mediate the relationship between leadership intellectual stimulation and team learning.

Method

Data Collection

A sample of 562 employees nested within 130 work units from 44 Small and Medium Size Enterprises (SME) in Spain was used in the study. Fifty-two percent (52%) of participants were men, and 84% had a permanent contract. The average job tenure was 5.89 years ($SD = 6.08$). Eighty percent (80%) of the organizations were from the service sector, 19% from industry, and 1% from the construction sector. Finally, teams had an average of nearly six members ($Median = 5$) with a range from two to 18 members.

Organizations were selected by convenience and invited (personally or by phone) to participate voluntarily in this research. Once agreed to participate, the questionnaires (30 minutes to administer) were distributed to employees and collected at the company by the researchers. Employees completed the questionnaire with their work-unit as their main referent, as stipulated in the HERO Model (Salanova et al., 2012). Only employees with a tenure in the company of at least six months participated in the study to ensure they had time to settle into their job and the organization. Confidentiality of the answers was guaranteed.

Measures

Leadership intellectual stimulation. It was assessed by three items of the intellectual stimulation sub-dimension of the transformational leadership scale (Rafferty & Griffin, 2004) validated for aggregated data at the team level by Salanova et al. (2012). Respondents answered using a 7-point Likert type scale ranging from 0 (*totally disagree*) to 6

(*totally agree*). The items were: “*Our supervisor... has ideas that have forced us to rethink some things that we have never questioned before; ...challenge us to think about old problems in new ways; ... has challenged us to rethink some of our basic assumptions about our work*” ($\alpha = .83$).

Team positive affect. It was assessed by six items validated for aggregated data at the team level by Salanova et al. (2012). Respondents answered using a 7-point face rating scale which allows capturing the emotional dimension of the construct examined. The items were as follow: “*In the last year, my group has felt: relaxed, enthusiastic, optimist, comfortable, resilient, satisfied*” ($\alpha = .89$).

Team learning. It was assessed by three items based on previous definitions and scales of team learning (Edmondson, 1999; Van der Vegt & Bunderson, 2005). Respondents answered using a 7-point Likert type scale ranging from 0 (*totally disagree*) to 6 (*totally agree*). The items were: “*In my team we share information about how to do our work*” “*In my team, we criticize each other’s work in order to improve performance*” and “*My team is open to exchange innovative and creative ideas*” ($\alpha = .74$).

Data Analysis

Since the data was self-reported, results might be influenced by common method variance. Thus, we conducted a one-factor test confirmatory factor analysis to assure validity of the measures (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) using an individual responses data set ($N = 562$). Next, as all variable were measures at the team level, different indices of agreement of employee perceptions in teams were calculated. First, to examine consistency and agreement, we used a consistency-based approach computing Intraclass Correlation Coefficients (ICC_1 and ICC_2): ICC_1 is interpreted as the proportion of the total variance that can be explained

by the group membership, and the ICC_2 is an estimate of the reliability of the group means (Bliese, 2000; James, 1982). Values greater than .12 and .60, for the ICC_1 and ICC_2 respectively, indicate an adequate level of within-unit agreement and support aggregation. In addition, we assessed within-team agreement in each measure computing the $r_{wg(j)}$ for multi-item scales (James, Demaree, & Wolf, 1993) as recommended by LeBreton and Senter (2008). Interrater agreement to justify aggregation of the study variables was concluded when $r_{wg(j)}$ was around .51 or greater which means moderate to very strong agreement according to the revised standards for interpreting interrater agreement estimates (Biemann, Cole & Voelpel, 2012; Lebreton & Senter, 2008). Finally, one-way analyses of variance were computed in order to ascertain whether there was significant between-group discrimination for the measures.

Following aggregation, we computed descriptive statistics, internal consistencies (Cronbach α) and correlations between variables at the individual ($n = 562$) and team ($n = 130$) levels using SPSS 21.0. We tested the hypothesized model using structural equation modeling (SEM) with AMOS 21 maximum likelihood estimation method with aggregated data at the team level. We performed a mediation analysis and, computed bootstrapped confidence interval for the indirect effect (Preacher & Hayes, 2008).

The following fit indices were considered to evaluate model fit. Three absolute fit indices were calculated: Chi-square (χ^2) goodness-of-fit statistic, Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR) were evaluated. Values of RMSEA below .08 and .05 indicate a reasonable and good fit, respectively, and SRMR values lower than .08 are indicative of a good fit (Hu & Bentler, 1999). The χ^2 goodness-of-fit index is sensitive to sample size and the use of relative goodness-of-fit indices are recommended (Bentler, 1990). Accordingly, three relative goodness-of-fit were examined:

Incremental Fit Index (IFI), Normed Fit Index (NFI), Tucker-Lewis Index (TLI), in addition to the Comparative Fit Index (CFI). Values equal or greater than .95 indicate a good fit for the relative indices (Hu & Bentler, 1999). Finally, we computed the Akaike Information Criterion (AIC) to compare competing models; the lower the AIC index, the better the fit is.

Results

Descriptive and Aggregation Analyses

Table 1 shows means, standard deviations, internal consistencies (Cronbach α), composite reliability and average variance extracted, correlations, and aggregation indices of all study variables. All correlations were statistically significant and in the expected direction. Considering that team size might be related to transformational leadership and/or team process (Cruz-Ortiz et al., 2013a; Koslowski & Ilgen, 2006), we examined the relationship of team size with variables aggregated at the team level. Team size was not statistically significant with intellectual stimulation ($r = -.116, p = .19$), team positive affect ($r = -.036, p = .68$), and team learning ($r = -.093, p = .293$). Thus, to assure model parsimony and following recent suggestions in the use of control variables in organizational research (Becker, Atinc, Breugh, Carlson, Edwards, & Spector, 2016), we did not incorporate team size into the model.

ICC₁ (range .26 to .32), ICC₂ (range .61 to .80) and the median of $r_{wg(j)}$ (range .75 to .79) exceeds the recommend criteria of .12 (ICC₁), .60 (ICC₂) and greater than .51 ($r_{wg(j)}$). One-way analysis of variance indicated statistically significant between-group discrimination of intellectual stimulation, $F(129, 432) = 2.69, p < .001$; team positive affect, $F(129, 432) = 3.09, p < .001$; and, team learning, $F(129, 432) = 3.20, p < .001$. Thus, results provide empirical support for data aggregation at the team level.

A one single factor Confirmatory Factor Analysis (CFA) was computed using individual data set, for the variables in the study. The one single factor model showed poor fit to the data in comparison with a 3 factors model ($\chi^2(51) = 106.14$, RMSEA= .04, SRMR = .03, CFI= .98, NFI=.98, TLI=.98, IFI=.98, AIC=160.13, $\Delta\chi^2(3) = 876.48$, $p < .001$). Average Variance Extracted (AVE) ranges from .51 to .62; square of the correlations of any pair of variables (ranged from .44 to .55) were lower than the AVEs, showing evidence of discriminant validity of the three latent factors.

Table 1.

Descriptive analysis and aggregation indices

	<i>M</i>	<i>SD</i>	<i>CR</i>	<i>AVE</i>	<i>ICC₍₁₎</i>	<i>ICC₍₂₎</i>	<i>r_{wg(i)}</i>	<i>1</i>	<i>2</i>	<i>3</i>
1. Leadership Intellectual Stimulation	3.97	1.11	.83	.62	.28	.63	.79	(.83)	.48	.64
2. Team Positive Affect	4.02	1.16	.90	.59	.33	.68	.75	.37	(.89)	.52
3. Team Learning	4.60	1.16	.75	.51	.34	.69	.78	.44	.36	(.74)

Note: Correlations are presented at the individual-level ($n = 562$, below the diagonal) and at the team-level ($n = 130$, above the diagonal). All correlations are significant at $p < .01$. Coefficient alpha reliability estimates for the individual database are listed in the diagonal in parentheses.

Model Fit: Structural Equation Modeling

We used the aggregated database at the team level to test the hypothesized model using SEM analysis. Table 2 reports the main results of the mediating analysis. Results indicate that full mediation model (M1_{Full Mediation}) does not fit well to the data. Values of RMSEA were above recommended criteria.

We further examined a second model (M2_{Partial Mediation}) in which leadership intellectual stimulation relates to both team learning and team positive affect. This M2 presents satisfactory fit to the data in comparison to M1 ($\Delta\chi^2(1) = 42.44, p < .001$). An inspection of the modification indices of the model revealed that if the error terms of *enthusiasm* and *optimism* were covariate model fit improves significantly. This covariation was conceptually in accordance of positive affect literature, which suggests that optimism and enthusiasm are both part of the same axis of affective well-being characterized by high pleasure and arousal (Warr, 1990). This revised model (M2_{Partial Mediation Revised}) presents the best fit to the data in comparison with M2 ($\Delta\chi^2(1) = 16.50, p < .001$).

All path coefficients in M2_{Partial Mediation Revised} are significant (see Figure 2). Intellectual stimulation is significantly related to team positive affect, $\beta = .56, p < .001 (R^2 = 31\%)$. When controlling for intellectual stimulation, team positive affect was significantly related to team learning, $\beta = .27, p < .001 (R^2 = 17\%)$. The direct effect of leadership intellectual stimulation on team learning, controlling for team positive affect was also significant, $\beta = .61, p < .001 (R^2 = .38\%)$. Results based on 500 bootstrapped samples confidence interval indicated that team positive affect significantly and partially mediates the relationship between leadership intellectual stimulation and team learning, $\beta = .15$, (lower BC 95% CI= .07, upper BC 95% CI= .29; $SE = .05$).

Overall, these results support that team positive affect partially mediates the relationship between leadership intellectual stimulation and team learning. Intellectual stimulation has a positive and significant influence on team positive affect, which in turn is positively and significantly associated with team learning. Finally, intellectual stimulation also shows a positive significant direct relationship with team learning.

Table 2.

Fit Indices for mediation SEM analysis (n = 130 teams)

Model	χ^2	df	p	RMSEA	SRMR	NFI	IFI	TLI	CFI	AIC	$\Delta\chi^2$	Δdf
M1 (Full mediation model)	144.99	52	.000	.118	.106	.88	.93	.90	.92	196.99		
M2 (Partial mediation model)	102.55	51	.000	.089	.050	.92	.96	.95	.96	156.56	42.44*** (M2-M1)	1
M3 (Partial mediation model Revised)	86.05	50	.001	.075	.048	.93	.97	.96	.97	142.05	16.50*** (M3-M2)	1

Note. χ^2 = Chi-square; df = degree of freedom; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized root mean square residual; NFI = Normed Fit Index; IFI = Incremental Fit Index; TLI = Tucker-Lewis Index; CFI = Comparative Fit Index; AIC = Akaike Information Criterion; Δ = difference. *** $p < .001$.

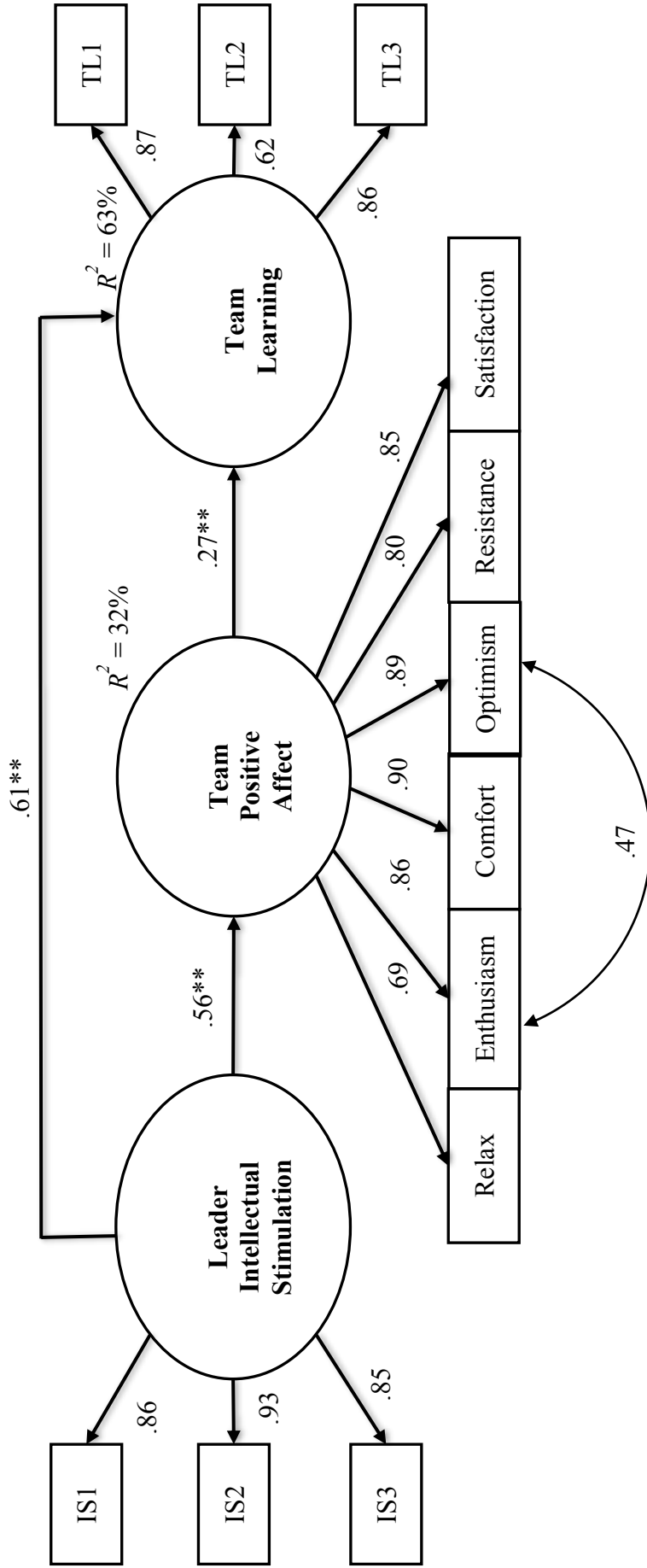


Figure 1. Mediation Model with standardized path coefficients (n = 130 teams)

Discussion

The aim of this study was to examine how team positive affect mediates leadership intellectual stimulation and team learning. As we discussed, several authors suggest the importance to evaluate the influence of specific leadership behavior on team and organizational processes (Burke et al., 2006; Nielsen & Munir, 2009). Since team learning becomes increasingly critical as organizational change and complexity intensifies (Edmondson, 1999), specific leadership behavior that leverages team learning activities seems to be important to investigate. Moreover, adding to the extant evidence, this research examines the role of team positive affect in the relationship between leadership intellectual stimulation and team learning. In addition, it contributes to enhance the understanding of leadership behavior to promote healthy teams (Salanova et al., 2012). The results show that intellectual stimulation has a positive and significant relationship on team learning when tested at the collective level. This coincides with past research, which also suggests that leaders can promote a learning environment, encouraging reflection and new ways of thinking and action (Edmondson, 1999, 2002, 2003). Leaders as a social resource can motivate and empower their teams to improve their collective way of thinking and acting.

Intellectual stimulation, as a leadership behavior, encompasses a series of leadership activities which are closely related to team learning since these leadership actions are aimed to challenge and encourage team members to reflect, think and act differently and in creative new ways. Thus, it is reasonable to understand why intellectual stimulation contributes significantly to the promotion of team learning. However, it is worth noting that leaders may have a direct influence in team's positive affect, which contributes to team learning as well. Leader behaviors that encourage learning promote both team learning and an affective climate, which in turn

increment team learning. Results of the mediation analysis showed that team positive affect relates significantly with intellectual stimulation and team learning, and that positive affect partially mediates the relationship. This provides evidence for the potential of team positive affect for team learning considering the capacity of positive affective states to broaden thinking and action repertoires. These results provide intriguing avenues for future understanding of how positive affect may have an influence on team learning through the development of other social or personal resources.

As well, intellectual stimulation has a significant effect on team positive affect. These results contribute to the existing literature on the link between leadership and team positive affective states, but considering one specific set of leader behaviors. Additionally, it contributes to generate new questions regarding the mediating role of team positive affect between intellectual stimulation of the leader and other variables such as innovative and creative behavior/performance, helping behaviors (Tsai et al., 2009) or cooperation (Sekerka & Fredrickson, 2008). As suggested by Sekerka and Fredrickson (2008), positive affective climate is a key resource to energize and sustain transformation; thus, by creating experiences that foster collective positive emotional climates, practitioners could stimulate cooperation in route to change. However, change does not come alone, it is inherently linked to learning new ways of thinking and behaving (Edmondson, 2002). In this line, it might be possible that intellectual stimulation fosters collective positive affective environment, which in turn influences some team characteristics or process such as cohesion, coordination or even psychological safety, which finally drives higher team learning. Future research should be conducted in this area.

Team positive affect also contributes to create a context in which team members can feel free to exchange ideas, knowledge, insights, reflect and criticize current assumptions, reflect

upon feedback and generate new ways of thinking and action. In accordance, team positive affect influences team and organizational dynamics such as idea-generation, creativity, adaptability to change, and facilitation or inhibition of learning process (Scherer & Tran, 2001). Positivity broadens the scope of attention and cognition and lead to a widened array of thoughts and actions. This result provides evidence of the potential of team positive affect to foster team learning, which in turn potentiates more effective groups.

Although the focus of the present study was on a specific leadership dimension, namely intellectual stimulation, it is possible that other transformational leadership behaviors also significantly relate to the current study outcomes of team positive affect and team learning. Bono et al. (2007) provide compelling evidence that leadership behaviors have an influence on employees' optimism and enthusiasm. Transformational leadership as a whole construct has been related to team affective states, satisfaction, and affective commitment (Chi, Chung & Tsai, 2011; Chi & Huang, 2014; Stinglhamber, Marique, Caesens, Hanin, & De Zanet, 2015; To, Tse, & Ashkanasy, 2015), and positive affect has been suggested as a relevant boundary condition for the influence of transformational leadership on effectiveness and behaviors (Gilmore, Hu, Wei, Tetrick, & Zaccaro, 2013). Hernandez-Baeza et al. (2009), for example, found that transformational leadership (i.e., charisma) infuses positive affect in its followers. In a meta-analytical study conducted by Dumdum, Lowe and Avolio (2002), they found that transformational leadership is consistently related to job satisfaction, and this relationship was stronger than the correlation found with effectiveness outcomes. Moreover, charisma and intellectual stimulation presented the highest correlations with satisfaction. Hobman et al. (2012) reported that intellectual stimulation of the leader had a significant positive relationship with satisfaction and performance mediated by members' identification with the leader. As well,

transformational leadership as a whole and its sub-dimension has been related to affective commitment (Rafferty & Griffin, 2004; Stinglhamber et al., 2015). In a study conducted by Rafferty and Griffin (2004), although they initially hypothesized a relationship between vision and affective commitment, showed that only intellectual stimulation and inspirational communication were statistically related to this outcome. Although this study was conducted at the individual level, it highlights the complex and multifactorial antecedents for the development of team affectivity and its link to leadership behaviors (Collins et al., 2013).

Although research related to the influence of each transformational leadership sub-dimension on team learning is scarce, it is well documented how leaders help to create a team environment in which members openly engage in learning process and activities (Edmondson, 1999). Leaders who articulate a vision and inspire followers, attend followers' needs and concerns, and behave in admirable ways provide a context with greater cohesion, trust and coordination (García-Guiu, Moya, Molero, & Moriano, 2016; Zanhg, Cao, & Tjosvold, 2011) which undoubtedly lead to team learning. Towler, Arman, Quesnell and Hoffman (2014), from a training perspective, found that trainers who demonstrated behaviors such as intellectual stimulation, visionary content and individual attention influenced positive affect which translate in skill acquisition and transfer of knowledge. In sum, and bearing on team literature, there are a number of affective and non-affective factors that influences team processes (i.e., task, coordination, cohesion, group size, interactions between group members) (Collins, Lawrence Troth, & Jordan, 2013; Kozlowski & Bell, 2003; Kozlowski & Ilgen, 2006); transformational leadership (i.e., intellectual stimulation in particular) and positive affect, are just one of these possible explanations.

Practical Implications

Bearing on the result of the present study, organizations should invest in developing leaders that are capable of intellectually stimulating their teams. This has implications for both team effectiveness (in terms of team learning) and team well-being (in terms of positive affect). As stated by Hannah and Lester (2009) “leaders are social architects and orchestrators of emergent process relevant to learning” (p. 35). Organizational management should consider leadership developing programs that include specific components related to how leaders can stimulate learning behaviors in their teammates and how to regulate and create the positive emotional context of the team.

For example, leadership development programs should incorporate practical session not only focused on transformational leadership as a whole, but also including specific exercises where leaders can develop their skills to intellectually challenge their team. This may include role modeling exercises on how to challenge their team members to see problems in new ways, being open to experimentation and to infuse positive critics inside their teams.

Leaders can be trained as learning coaches to focus on the development of their team, minimizing suboptimal contributions of its members, and fostering advancement of knowledge, skills, idea generation and reflexivity for performance improvement. Previous research indicates that leader empowerment behavior (which include leaders’ actions that emphasize followers’ development, coaching, monitoring and feedback) facilitates effective performance outcomes through team learning (Burke et al., 2006). Thus, organizational management should consider investing resources to promote leaders’ skills and contextual factors that stimulate team members to openly express ideas and suggestions, as well as to collaboratively evaluate each other ideas and assumptions. Moreover, leaders have to be aware on the impact they have in their team

positive affect climate and how this climate may contribute to build enduring cognitive and social resources. Affectivity must be considered in organizations not just as a well-being indicator, but also as an initiator of positive outcomes such as learning.

Limitations and Future Research

This study contributes to the understating of the role leadership intellectual stimulation and team positive affect to team learning. Even though this study uses a large and heterogeneous sample, results of this study have some limitations that should be addressed in future studies. First, all variables were collected from self-reported measures at the same time, although results from confirmatory factor analysis test suggested discriminant validity of scales. Future studies should include data collected from other informants (i.e., supervisors) or provide temporal lags between measures.

Additionally, this study does not consider the type of team (e.g., self-managed, multidisciplinary) as other studies have done (Edmondson, 1999; Van der Vegt & Bunderson, 2005). This could compromise the generalizability of the results. However, results suggest that, for diverse teams from different organizations, intellectual stimulation of the leader is important for both team learning and team positive affect.

Finally, this was a cross-sectional study, thus it is not possible to reach decisive conclusions about the causation between variables in the model. Future longitudinal designs should be conducted to examine a possible causal relationship between intellectual stimulation and team positive affect. This would also contribute to test the existence of gain spirals of team positive affect, their relationship with other social resources, and their effect on to team learning over time.

Conclusion

This study provides evidence of the strong influence that leadership intellectual stimulation has on team learning and team positive affect, as well as the potential of positive affect to stimulate team learning. Positive affect serves as a partial mediator between leadership intellectual stimulation and team learning, contributing to explain significant additional variance. In an economy and organizational context, which requires constant changes, leaders that encourage continuous learning within their team contribute to both: the way the team learns and the way the team feels. This suggests the importance of developing leaders' behaviors that encourage learning and team positive affect contexts which contributes to team learning and hence to performance.

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CHAPTER 4**Learning resources to develop team resilience and improve performance: A multilevel approach****Abstract**

This study explored learning at the team and organizational level considering how HR learning practices and team learning relate to team resilience and performance. Based on the HERO model and the propositions from Lengnick-Hall et al. (2011), the study proposed that HR learning practices are crucial for building resilience capacity in organizations. This study first examined the mediation role of team resilience between team learning and performance. Secondly, it explored the cross-level interaction effect of HR learning practices in this mediation. A multilevel moderated-mediation analysis was conducted using 825 employees nested in 200 teams from 56 organizations in Spain. Results supported the proposed hypothesis. Team resilience serves as a partial mediator between team learning and team performance. The cross-level interaction was significant, suggesting that organizations with more HR learning practices and team learning reported higher team resilience. Moreover, HR learning practice moderated the indirect effect of the proposed mediation. Organizations should promote learning opportunities at the team and organizational levels to build healthy and resilient organizations.

Keywords: HR learning practices, HERO Model, healthy organizations, team resilience, team performance

Introduction

In current socio-economic conditions of uncertainty, turbulence, instability, adversity and change, organizations need resources to continuously adapt and thrive. Organizations should maintain flexible, malleable, developable and storable resources, either, cognitive, social, and financial to positively adapt and become resilient amidst adversity (Carmeli & Markman, 2011; Lengnick-Hall, Beck, & Lengnick-Hall, 2011; Gitell, Cameron, Lim, & Rivas, 2006; Sutcliffe & Vogus, 2003). Under these contracting conditions, human resources practices may be seen as costly and irrelevant to gain competitive advantage. However, they are important to understand how organizations and teams overcome obstacles and achieve better functioning and performance (Lengnick-Hall & Beck, 2005; Rodríguez-Sánchez & Vera, 2015).

In fact, team resilience, the capacity to rebound from adversity strengthened and more resourceful (Sutcliff & Vogus, 2003), has gained considerable interest in organizational research as a capacity that can be developed deliberately through human resources practices (Lengnick-Hall & Beck, 2005; Lengnick-Hall et al., 2011; Rodríguez-Sánchez & Vera, 2015). Different models and theoretical advancements have been developed to understand factors that promote resilience at work and organizations (Lengnick-Hall et al., 2011; Mallak, 1998; Salanova, Llorens, Cifre, & Martínez, 2012). Nonetheless, scarce empirical evidence has been collected to identify from a multilevel perspective on how contextual (i.e., human resources practices) and learning processes contribute to resilience development at work.

Organizations need to develop human capital resources to acquire competitive advantage, anticipate possible challenges or threats, and take action under challenging situations (Hatch & Dyer, 2004). This context requires organizations to focus on the development of healthy

individuals, teams and organizations (Salanova, Llorens, Cifre, & Martínez, 2012; Salanova, Llorens, & Martínez, 2016; Wilson, DeJoy, Vandenberg, Righardson, & MacGrath, 2004).

The Healthy and Resilient Organization (HERO), as suggested by Salanova et al. (2012), makes systematic, planned and proactive efforts to improve processes and outcomes at the employee, team and organizational levels. Organizations are resilient since they can maintain positive adjustments under challenging conditions, bounce back from untoward events and maintain desirable outcomes. These efforts involve implementing healthy organizational resources and practices at the task, interpersonal and Human Resources (HR) practices to improve work environment. HR practices, policies and activities are crucial for the development of resiliency at organizations (Lengnick-Hall et al., 2011). Alongside HR practices, team learning is a decisive process to sustain organizational learning in competitive and changing environments (Edmondson, 2002; Sánchez-Cardona, Sánchez-Lugo, & Vélez, 2012). As a team process, learning is helpful to achieve desirable outcomes, positive adaptation to change and improved performance (Edmondson, 1999; Edmondson, Bohmar & Pisano, 2001; Kozlowski & Bell, 2008; Van der Vegt & Bunderson, 2005). Upon this process of ongoing reflection and action, team members ask questions, seek feedback, experiment, reflect on results and discuss errors or unexpected outcomes (Edmondson, 1999). Team members gain mastery, competencies and cognitive and social resources and are able to cope with unforeseen situations of adversity.

Systematic development of learning capabilities within individuals, teams and organizations are essential in the development of resilience (Lengnick-Hall et al., 2011; Vogus & Sutcliffe, 2007). However, organizations may differ in the systematic implementation of HR learning practices, which may have an effect in the development of learning resources and collective capabilities to cope with untoward conditions.

Vogus and Sutcliffe (2007) posit that the importance of the study of resilience relies on the necessity to shed light on how organizations and teams achieve desirable outcomes in the midst of adversity, stress, uncertainty and unstable situations. Following this assertion, the aim of this study is to explore team learning as an antecedent of team resilience, and the role of contextual factors such as HR learning practices, in the development of team resilience. We argue that team resilience, as an emergent state, serve as a mediator on the relationship between team learning and team performance (Meneghel, Salanova, & Martínez, 2016a; 2016b). Moreover, considering the importance of the HR learning practice for the promotion of learning and resilience (Lengnick-Hall et al., 2011; Salanova et al., 2012), we suggest that HR learning practices moderate the indirect effect between team learning and team performance via team resilience. Organizations with higher levels of HR learning practices and team learning will be expected to have greater resilience. As well, we expect that, at low level of HR learning practices, team learning will have a stronger indirect effect on performance.

Team Learning and Team Performance

Team learning is an ongoing process of reflection and action through which teams acquire, share, combine, and apply knowledge (Argote, Gruenfeld, & Naquin, 2001; Edmondson, 1999). Through team learning, members of a team question their assumptions, obtain and reflect upon feedback, discuss differences, and make changes to adapt and improve (Edmondson, 1999, 2002). As opposed to traditional perspectives on organizational learning, Edmondson (2002) proposed that organizational learning is local, interpersonal and variegated and explored how teams allow organizations to engage in learning in competitive environments. This process is facilitated by contextual factors such as psychological safety, trust, quality of interactions and leadership support (Edmondson, 1999, 2004; Edmondson, Bohmer, & Pisano, 2001; Van der

Vegt, & Bunderson, 2005; Van den Bossche, Gijsselaers, Segers, & Kirschner, 2006). As well, team learning has been related to team performance (Edmondson, 1999; Van Der Vegt & Bunderson, 2005; van Woerkom & Croon, 2009), quality of intra-team relations (Zellmer-Bruh & Gibson, 2006), efficiency and innovativeness (Wong, 2004).

Team learning behaviors are then relevant for performance and effectiveness particularly in situations where learning is needed (Edmondson, 1999; Van Offenbeek, 2001). Learning processes are time consuming and there are conditions where they may reduce performance and efficiency (i.e., teams with routine repetitive tasks with little need for improvement). However, as suggested by Edmondson (1999), when facing change and uncertainty learning may provide potentially greater gains: “[...] in such settings, teams must engage in learning behaviors to understand their environment and their customers and to coordinate member’s action effectively” (p. 354). Thus, the hypothesis is the following:

Hypothesis 1: Team learning is positively related to team performance.

Team Resilience

Learning may emerge in situations of errors, crises, and disruptions of routines (Edmondson, Bohmer, & Pisano, 2001; Elliot & Macpherson, 2010; Tucker & Edmondson, 2003; Vogus & Sutcliffe, 2007; Wang, 2008). Under these circumstances resiliency could also emerge and protect teams from the negative effects of troublesome or stressful events. In fact, Lengnick et al. (2011) proposed that resilience in organizations is developed through practices that create competencies among employees that, when aggregated, makes organizations more prone to effectively respond to threats and take transformative actions to capitalize performance.

Resilience has been extensively studied at the individual level (Masten, 2001; Masten & O'Dougherty Wright, 2010) as a “dynamic process encompassing positive adaptation within the context of significant adversity” (Luthar, Cincchetti, & Becker, 2000, p. 435) and it is an important psychological capacity to overcome difficulties during a lifetime (Masten & O'Dougherty Wright, 2010). In work and organizational literature, the emergence of a collective experience of resilience has gained considerable attention (Meneghel et al., 2016a, 2016b; West, Patera, & Carten, 2009). Sutcliff and Vogus (2003) defined resilience in the workplace as “the capacity to rebound from adversity strengthened and more resourceful” (p. 97). Therefore, resilience can be considered as both an individual characteristic and a social factor in teams (Bennett Aden, Broome, Mitchell, & Rigodon, 2010; Meneghel et al., 2016a, 2016b).

Resilience can be conceptualized as an emergent state (Kozlowski & Klein, 2000). As such it is dynamic and varies in function of team context, inputs, process and outcomes (Kozlowski, Chao, Grand, Braun, & Kuljanin, 2013; Kozlowski & Klein, 2000). As stated by Kozlowski and Kelin (2000) to describe the development of emergent states, it can originate in the cognition, affect, behavior, or other characteristics of individuals, is amplified by their interactions, and manifests at a higher level. As well, emergent constructs may result from shared experiences from the team members. Thus, team members have similar perceptions or experiences derived from team inputs and processes, resulting in common understandings, responding and feeling in a similar way (Kozlowski & Kelin, 2000). Moreover, Lengnick-Hall et al. (2011) proposed that “organization capacity for resilience is a multilevel collective attribute emerging from the capabilities, action and interactions of individuals within the organization” (p. 253). In this line, Meneghel et al. (2016a, 2016b), based on the social identity theory (Tajfel & Turner, 1985), suggest that team resilience could emerge as a shared experience based on

individuals' identifications with their teams and the internalization of its values and norms, which leads to shared attitudes and behaviors. We followed this assertion and defined team resilience as “the capacity to bounce back from failure, setbacks, conflicts, or any other threat to well-being that may be experienced” (West et al., 2009, p. 253).

Team Learning and Team Resilience

Crises are often opportunities to learn (Elliot & Macpherson, 2010; Stern, 2008; Wang, 2008). Organizations and their members are capable of analyzing and reflecting upon their experiences during troublesome events and using these as an element for adaptation, change and improvement (Tucker & Edmondson, 2003; Wang, 2008). People can use their lessons learned from past experiences to guide their current and future actions (Stern & Sundelius, 2002). In this sense, individuals reflect upon the crisis experience, collect lessons and develop plans for the future (Wang, 2008). From this end, it seems that learning is important for developing resilience in the work context (Robb, 2000; Sutcliff & Vogus, 2003).

Thereby, the proposal is not only to focus on learning after the untoward event, but also incorporating learning processes and opportunities as resources to help teams and organizations to recognize, prevent and cope with crisis (Lengnick-Hall et al., 2011; Stern, 2008). Thus, resilience results from processes and dynamics that create or retain resources (cognitive, emotional, relational, or structural) in a form sufficiently flexible, storable, convertible and malleable that enables organizations to successfully cope with and learn from the unexpected (Sutcliffe & Vogus, 2003). Based on this, we hypothesized that:

Hypothesis 2: Team learning is positively related to team resilience.

Team Resilience and Performance

Resilience is characterized by adaptive and flexible responses to adversity and with the capacity to “bounce back” with more strength and resources. At the individual level, research has found that resilient individuals are more prepared, flexible and open to new experiences to cope with stressful situations (Tugade & Fredrikson, 2004). This may lead us to suggest that at the collective level, teams with high levels of resilience can perform with more effectiveness in adversity and perceive these challenging situations as opportunities to grow (Carmeli, Friedman, & Tishler, 2013). At a collective level, resilience refers to the capacity to: (1) maintain positive adjustment under challenging conditions; (2) bounce back from untoward events; and, (3) maintain desirable function and outcomes (Lengnick-Hall et al., 2011; Sutcliff & Vogus, 2003). The ability to thrive from this negative experience will protect teams from negative experiences and result in increased performance (West et al., 2009).

Recent literature provides evidence of the relationship between resilience and performance in work and organizational settings. For example, Meneghel et al. (2016a) found that team resilience mediates the relationship between collective positive emotions and team in-role and extra-role performance. As well, team resilience serves as a mediator in the relationship between job social resources (support climate and team coordination) and team performance (Meneghel et al., 2016b). These results suggest that team resilience relates positively to a broader perspective of performance contemplating both task performance and contextual performance.

Hypothesis 3: Team resilience is related positively with team performance and serves as a mediator between team learning and performance.

The Moderating Role of HR Learning Practices

Teams are embedded within organization (Kozlowski & Klein, 2000), thus team learning and team resilience may be affected by policies and practices at the higher level. Edmondson (2003) proposed that supportive organizational contexts (i.e., resources, information, management support, innovation history) promote team learning. Other research suggests that team external communication (i.e., going outside the team for information and advice) is important for team learning manifestation (Van der Vegt & Bunderson, 2005).

Gittell et al. (2006) conducted an investigation within the U.S. airline industry after the terrorist attack of September 11th and found that financial and relational reserves contribute to organizational resilience. Meneghel, Borgogni, Miraglia, Salanova and Martínez (2016) found that collective perception of social context (i.e., high quality relationships) relates to team resilience and better performance. These results put forward that contextual features may directly or indirectly affect or moderate team process and outcomes (Mathieu et al., 2008).

Thereby, organizations must provide formal and systematic efforts to develop healthy and resilient organizations. Salanova et al. (2012) proposed a heuristic model to explain Healthy and Resilient Organizations (HERO) to understand how organization may develop and sustain healthy and stronger organizational context amidst the adversity. HERO makes systematic, planned and practice efforts to improve employees' and organizational processes and outcomes (Salanova et al., 2012; Salanova et al., 2016). These efforts involve organizational practices and resources at the task (i.e., autonomy, feedback), interpersonal (i.e., social relationships, leadership), and organizational (i.e., HR practices). Organizations that implement healthy practices (i.e., HR learning practices) will influence on the development of teams and individuals (i.e., healthy teams) and this will lead to positive team and organizational outcomes (i.e., team

performance) (Salanova et al., 2012; Salanova, 2016). Based on the proposal of the HERO Model, and other empirical research, we sustain that practices to promote continuous learning, growth and development are essential to develop healthy and resilient teams (DeJoy et al., 2004; Rego & Pina e Cunha, 2009; Salas & Weaver, 2016).

In line with this, Rego et al. (2009) reported that perceptions of opportunities for learning and personal development in organizations are better predictors for affective well-being (pleasure, enthusiasm and vigor). In addition to well-being, human resources practices aimed for learning opportunities and professional development expands job relevant knowledge, skills and abilities, improving organizational effectiveness and quality and preparing human capital to respond effectively to known and unknown circumstances (Salas & Weaver, 2016). Employees in organizations that emphasize on human capital development (i.e., training) are more productive and participate in learning activities (Hatch & Dyer, 2004).

Recently, Kostopoulous, Bozoinelos and Syrigos (2015) reported that organizational-level high performance human resources (HPHR) practices, which foster a context that provides the unit's workforce with ability, motivation and opportunities to perform and use diverse knowledge assets (p. S115), facilitate complex learning (exploratory and exploitative learning activities). Exploratory learning refers to search, experimentation and discovery of new knowledge, whereas exploitative learning is associated with the refinement, efficient use and implementation of current knowledge and skills. More particularly, the availability of knowledgeable, skilled and creative employees, as reported by the authors, enable units to perform complex learning activities. They conclude that HPHR "serve as an important contingency for realizing ambidexterity (exploratory and exploitative) at lower hierarchical levels" (p. S127).

Rodríguez-Sánchez and Vera (2015) presented a revision in which they summarized factors to build team resilience. At the team level, they conceptualize important developable factors: (1) collective efficacy, (2) transformational leadership and (3) team work. At the organizational level they consider organizational practices, which include information provision, support practices and development of specific skills and resources. They argue that skills and career development are fundamental for building resilience. Career development will align team members with their preferences and competences, assuring teams with appropriate set of competences not only to develop their work effectively but to cope with stressful and unexpected situations (Rodríguez-Sánchez & Vera, 2015). In addition, team members interested in the same practice and learning domain will engage in collective and social learning improving performance (Sánchez-Cardona et al., 2012).

This idea is in line with Lengnick-Hall et al.'s (2011) theoretical model for the development of resilience in organizations. They proposed that an organizational capacity for resilience is developed through strategically managing human resources to create competencies among employees, that when aggregated at the organizational level, make it possible to achieve the ability to respond in a resilient manner. According to this proposition, HR policies and practices can influence individual attitudes and behaviors so when these contributions are aggregated at higher levels, organizations are more likely to develop resilience. Their model contains three dimensions that are central to promote organizational capacity for resilience: cognitive, behavioral and contextual. They further analyzed these dimensions at three levels: individual contributions of the employees (i.e., expertise, sharing information and knowledge, devising unconventional responses to challenges), HR principles (i.e., invest in human capital, encourage knowledge sharing, encourage social interactions) and HR policies (i.e., continuous

development opportunities, experimentation and accessible information systems). This model relies heavily on the relevance of learning practices for development as essential factors to build resilience. As Lengnick-Hall et al. (2011) stated: “Strategic human resources management systems are instrumental in developing the requisite knowledge, skills, abilities and other attributes (KSAOs) and in invoking the appropriate collective routines and process to generate resilience outcomes” (p. 244). Although they provide a complex and well-integrated model, no empirical evidence has been provided yet to understand which and how particular HR practices (such as learning practices) relate to team resilience and performance.

Based on the idea that organizational contextual aspects may play a role in the development of team learning and team resilience, in particular the role that HR learning practices for development and career promotion may have, we proposed that HR learning practices at the organizational level will moderate the relationship between team learning and team performance. More specifically, we propose that the indirect effect of team learning on team performance via team resilience will be moderated by HR learning practices. For those organizations, in which HR learning practices are low, and considering the importance of learning process for the development of resilience and positive adaptation, the indirect effect of team learning on performance via resilience will be higher. Thus, we hypothesized that:

Hypothesis 4: HR learning practices moderates the indirect effect of team learning on team performance via team resilience. Thus, organizations with higher HR learning practices and team learning will be higher in team resilience.

Method

Sample and Procedure

The study was conducted using a sample of 825 employees nested in 200 teams from 56 organizations in Spain. Sixty-nine percent (69%) of the organizations belonged to the service sector, 21% to the industry sector and 10% were construction companies. Organization size ranged from 6 to 171 employees ($M= 53.69$, $SD= 40.83$). Team size ranged from 2 to 13 employees ($M= 4.13$, $SD= 2.39$). Fifty-one percent of participants were male, and 85% were full time employees. Participants reported an average job tenure of 6.14 years ($SD=6.24$).

In order to collect the data, the researcher contacted a key member of the management team in each organization to explain the purpose and requirements to participate in the study. We explained that participation in the study was voluntary, that all identifying information would be removed and that only aggregated data would be reported. After reaching an agreement to participate, the research team scheduled a visit to the organization. Questionnaires were administered to the participants. We considered employees to be members of a team when they had the same supervisor and interacted frequently to achieve common goals. To lead respondents' attention to the team and organizational level, all items focused on team and organizational perception as proposed by HERO (Salanova et al., 2012) using a referent shift consensus composition (Chan, 1998). Each questionnaire included a code number for each team to assure the paring of each employee questionnaire with its respective team.

Measures

HR learning practices. We measured HR learning practices through items derived from a large set of subscales measuring healthy organizational practices developed and validated by Salanova et al. (2012). Participants were asked if, during the last year, their organization had

implemented strategies or practices regarding compensation, work-life balance, mobbing prevention, communication, training and development, among others. For the purpose of this study, we used two questions related to training and development, specifically: “Practices that facilitate employees’ abilities (e.g., training)” and “Practices for employees’ career development (e.g., promotions)”. In all the cases the referent was the organization (i.e., “*In this organization*”). Respondents answered using a 7-point Likert-type scale from 0 (*never*) to 6 (*always*). The Cronbach alpha coefficient for this study was .79.

Team learning. We assessed team learning using three items based on previous definitions and scales of team learning (Edmondson, 1999; Van der Vegt & Bunderson, 2005). This scale was used in previous researches with good psychometric properties (Sánchez-Cardona, Salanova, & Llorens, 2017). Respondents answered using a 7-point Likert type scale ranging from 0 (*totally disagree*) to 6 (*totally agree*). The items were: “*In my team we share information about how to do our work*” “*In my team, we criticize each other’s work in order to improve performance*” and “*My team is open to exchange innovative and creative ideas*”. The Cronbach alpha coefficient for this study was .73.

Team resilience. We measured team resilience with a 7-items scale presented by Meneghel et al. (2016), which was based on Mallak’s (1998) principles for implementing resilience in organizations. The referent of this scale was the team. Respondents answered using a 7-point Likert type scale ranging from 0 (*totally disagree*) to 6 (*totally agree*). An example of the items is as follows: “*In difficult situations, my team tries to look on the positive side*”. The Cronbach alpha coefficient for this study was .86.

Team performance. We used a six-item scale adapted from Goodman and Svyantek (1999) reworded at the team level which measured in-role (e.g., “*The team that I supervise*

performs all the functions and tasks demanded by the job") and extra-role performance (e.g., *"In the team that I supervise employees perform roles that are not formally required but which improve the organizational reputation"*). Respondents answered in a 7-point Likert scale ranging from 0 (*completely disagree*) to 6 (*completely agree*). This scale has been previously used in resilience research at the team level (Meneghel et al., 2016). The Cronbach alpha coefficient for this study was .84.

Analytical Strategy

First, prior to analysis, all variables were examined for accuracy and missing data using individual data sets. Missing values on indicators of all variables were less than 5% (range 1.0%-4.8%), thus, regression imputation was conducted considering that such low proportion of missing data did not produce biased estimates and standard error (Tabachnick & Fidell, 2013).

Second, we calculated internal consistencies (Cronbach's alpha), descriptive analysis and correlations among the variables under study, using the IBM-SPSS 23.0. Third, since data was all self-reported, and to assure common method bias was not an issue in this data set, we followed statistical procedures, specifically we conducted a one-factor test (Podsakoff et al. 2003; Podsakoff, Mackenzie, & Podsakoff, 2012) using IBM-AMOS 23.0.

Forth, since learning, resilience and performance were measured at the team level, we aggregated individual perceptions to the group and perception of HR learning practices to the organizational level. Within team agreement and evidence for aggregation was assessed using various indices: (1) the $r_{wg(j)}$ index (James, 1982; James, Demaree & Wolf, 1993), which shows the interrater agreement to justify aggregated scores for the study variables (LeBreton & Senter 2008); (2) the Intraclass Correlations Coefficient ($ICC_{(1)}$), which estimates the proportion of variance between participants that could be accounted for by differences in team membership,

and (3) one-way analysis of variance (ANOVA) were used to test for statistically significant differences between teams. Values of $r_{wg(i)}$ around .51 or greater are considered as indicators of moderate to very strong interrater agreement for team aggregation (Lebreton & Senter, 2008), whereas values greater than .05 for ICC(1) provide evidence to support aggregation. Finally, significant one-way ANOVA F -value supports between-group and aggregation of scores at the team level (Kenny & LaVoie, 1985).

Finally, multilevel modeling was used in the current study because of the nested nature of 200 teams (level-1) within 56 organizations (level-2). This approach does not assume that individuals are independent (Snijders & Bosker, 2012). Thus, data was analyzed through Hierarchical Linear Modeling (HLM) (Hofmann & Gavin 1998; Hox 2002). We fit a series of nine nested multilevel models to the data using STATA vs.12 software. This method is suitable for analyzing data in a nested structure by constructing a separate sub-model at each levels in the data structure (Raudenbush & Bryk 2002). It allows us to make simultaneous inferences about the effects of variations in the independent variables at the team level (i.e., team learning, team resilience) and organizational level (i.e., HR Learning Practices) on the dependent variables (i.e., team performance), and at the cross-level moderating effect of level 2 independent variables. Before conducting these analyses, all predictors at level 1 were centered relative to the group mean, whereas, in testing the cross-level moderation, the moderator at level 2 (i.e., HR learning practices) was centered using a grand mean (Aguinis et al., 2013; Hoffman & Gavin, 1998).

Direct effects of team learning on team resilience and performance and indirect effect of team learning on team performance via team resilience was tested using multilevel mixed-effects models using STATA vs. 12 (i.e., lower level mediation model, Bauer, Preacher & Gil, 2006; Preacher & Selig, 2012). Finally, cross-level moderating effect of HR learning practices and the

moderated-mediation effect were tested as suggested by Aguinis et al. (2013) and Bauer et al. (2006).

For testing the significance of the indirect effect of team learning on team performance via team resilience, we conducted Monte Carlo simulations with 20,000 replications and computed 95% confidence intervals (Bauer et al., 2006; Preacher, Curran, & Bauer, 2006; Selig & Preacher, 2008), as reported in recent studies (Huang & Luthans, 2015; Iles, Liu, Liu, & Zheng, 2017). To further examine significant moderation effect, simple slope analyses were conducted at different values of the moderator (i.e., HR learning practices) at the first stage of the mediation and the conditional indirect effect. To further examine the moderated-mediation effect, we tested the indirect effect of team learning on team performance via team resilience at higher (+1 *SD*) and lower levels (-1 *SD*) of HR learning practices as suggested for multilevel moderated mediation models (Bauer et al., 2006).

Results

Descriptive Analysis

We examined a one-factor test with Confirmatory Factor Analysis (CFA) using individual data ($n=825$), for the variables in the study. The model with one single factor revealed a poor fit to the data ($\chi^2 = 1264.57$, $df = 77$, $p = 0.000$; RMSEA = 0.14; SRMR = .084; CFI = 0.74; IFI = 0.74; TLI = .70). The comparison of this model with four latent factors (i.e., team learning, resilience, performance and HR learning practice) revealed a significantly higher fit improvement showing suitable goodness-of-fit indices ($\chi^2 = 423.184$, $df = 71$, $p = 0.000$; RMSEA = 0.08; SRMR = .046; CFI = 0.92; IFI = 0.92; TLI = .90, Delta $\chi^2 (6) = 841.386$, $p < 0.001$). These results show that one single factor could not account for the variance in the data

reported by employees. We can consider that common method variance is not a deficiency in this dataset.

Tables 1 and 2 present means, standard deviations, internal consistencies (Cronbach’s alpha), and correlations at the individual and team level. All scales showed acceptable internal consistencies. All variables were positively and significantly related and in the expected direction. At the team level, team learning was significantly related to team resilience ($r = .37, p < .01$) and team performance ($r = .44, p < .01$), and team resilience was significantly related to team performance ($r = .57, p < .01$). As well, HR learning practices was significantly related with all study variables. Initially, team size was considered as control variable in the study since previous research suggested that it may play a role in team psychological process (Kozlowski & Ilgen, 2006); however, correlations at the team level were not significant. Moreover, the addition of team size as control variable in the multilevel model did not show statistical significance¹. Consequently, we decided not to include team size as a covariate for parsimony and following recent suggestions on the usage of control variables in organizational research (Becker, Atinc, Breugh, Carlson, Edwards, & Spector, 2016).

Table 1.

Means, standard deviations, and correlations among variables at the individual level (n = 825)

	<i>M</i>	<i>SD</i>	α	1	2	3	4
1. HR Learning Practices	3.66	1.46	0.79	-			
2. Team Learning	4.54	1.15	0.73	0.39**	-		
3. Team Resilience	4.45	0.88	0.86	0.49**	0.42**	-	
4. Team Performance	4.85	0.77	0.84	0.31**	0.38**	0.54**	-

*Note: ** $p < 0.01$*

¹ Results are available upon request to the first author.

Table 2.

Means, standard deviations, and correlations among variables at the group level (n = 200)

	<i>M</i>	<i>SD</i>	α	1	2	3	4
1. HR Learning Practices	3.65	0.97	0.79	-			
2. Team Learning	4.68	1.15	0.81	0.18*	-		
3. Team Resilience	4.51	0.87	0.75	0.23**	0.37**	-	
4. Team Performance	4.86	0.79	0.86	0.28**	0.44**	0.57**	-

Note: * $p < 0.05$, ** $p < 0.01$

Aggregation Analysis

All measures in this study have the team and organization as a referent, thus aggregated scores were used for analysis. Before testing multilevel hypothesis, it was necessary to statistically justify within team agreement and whether there is sufficient variance at the level 1 variable in the current study that can be explained by a higher level of variables. In the case of level 1 (team learning, resilience and performance) and level 2 (HR learning practices) variables, interrater agreement measures using the $r_{wg(j)}$ index (James et al., 1993) reveals moderate to strong agreement (Lebreton & Senter, 2008). The mean $r_{wg(j)}$ value for team learning was 0.74 ($SD = .27$), for team resilience was 0.82 ($SD = .12$) and for team performance was 0.88 ($SD = .16$), which is above the commonly suggested threshold of 0.70 (Bliese, 2000). Similar occur with HR learning practices variable with a mean $r_{wg(j)}$ of .53 ($SD = .27$). Intraclass correlation coefficient ($ICC_{(1)}$) values for the variables were: 0.22 for team learning, 0.14 team resilience, and 0.22 for team performance, and 0.05 for HR learning practice. The ICC values were within the acceptable criterion for ICC reported in previous reviews of multilevel research (Bliese 2000). One-way ANOVA F values ranged from to 1.839 to 3.747 ($p < .001$). These empirical results justify aggregation of the data for multilevel modeling.

Test of Hypothesis

We fitted a series of multilevel equations; the results are shown in Table 2. First, the results indicated that the ICC for Model 1 equals .13, which means that differences across organizations account for about 13% of the variability in team resilience. ICC values for Model 5 equals to .11, which means that differences across organizations account for about 11% of the variability in team performance. These results provide evidence for the nested data structure that requires multilevel modeling.

Table 2.

Results of Hierarchical Linear Modeling (Organizational level $n=56$; Team level $n=200$)

Variables	Team Resilience			Team Performance					
	M1 (null)	M2	M3	M4	M5 (null)	M6	M7	M8	M9
L1 – variables (Team)									
Intercepts	4.52 (.063)**	4.52 (.062)**	4.51 (.056)**	4.52 (.057)**	4.89 (.066)**	4.90 (.065)**	4.91 (.064)**	4.91 (.058)**	4.91 (.057)**
Team Learning	.331 (.058)**	.331 (.058)**	.331 (.066)**	.348 (.060)**		.320 (.049)**	.18 (.047)**	.18 (.054)**	.18 (.054)
Team resilience							.42 (.060)**	.41 (.073)**	.41 (.073)**
L2 – variables (Organizational)									
HR learning practices			.21 (.058)**	.20 (.059)**				.21 (.056)**	.21 (.056)**
Cross-Level interaction									
HR Learning Practices				.131 (.057)*					.001 (.075) n.s.
X Team Learning									.268
HR Learning Practices									
X Team Resilience									
σ^2 Team level (Within team Var)	.747	.607	.557	.559	.557	.435	.329	.268	
σ^2 Organizational (Intercept var)	.011	.030	.019	.018	.067	.090	.112	.086	
-2 x log	514.59	469.47	452.13	448.53	469.70	423.85	233.32	356.29	356.99
Δ -2 x log		45.19**	17.35**	3.6*		45.85**	190.53**	122.97**	.069 n.s.
Number of estimated parameters	3	4	7	8	3	4	5	6	7
R ²	0	.16	.24	.24	0	.16	.29	.43	.43

Note: L1 = Level 1; L2 = Level 2. L1 $n=200$ and L2 $n=56$. Values in parentheses are standard errors; t statistics were computed as the ratio of each regression coefficient divided by its standard error. * $p<0.05$; ** $p<0.01$; n.s.= non-significant.

As suggested in Hypothesis 1, team learning significantly predicted team performance ($\gamma = .32, p < .01$). Therefore, we found support for Hypothesis 1. Hypothesis 2 stated that team learning significantly predicted team resilience. Results provided support this hypothesis showing that team learning significantly predicted team resilience ($\gamma = .32, p < .01$). Hypothesis 3 indicated that team resilience mediates the relationship between team learning and team performance. Team resilience was significantly related to team performance ($\gamma = .42, p < .01$). The estimate of the indirect effect of team learning on team performance through team resilience was .14 with a 95% confidence interval (CI) of [.081, .205] (Preacher & Selig, 2012). Thus, the Hypothesis was supported.

We further hypothesized a moderated-mediation effect; thus, it was expected that HR learning practices would moderate the indirect effect of team learning on team performance through team resilience. We followed the recommendation of Bauer et al. (2006) to test the cross-level interaction on the lower level mediation model. In addition, best practices recommendation for cross-level interaction effect in multilevel model were followed (Aguinis et al., 2013). We specified the indirect effect of team learning on team performance at different level of HR learning practices.

Results shows a significant moderation effect of HR learning practices, suggesting that the relationship between team learning and team resilience is stronger when HR learning practices are higher ($\gamma = .131, p < .01$). We also tested for any moderation effect at the second stage of the mediation (i.e., Team resilience \rightarrow Team performance), however, the interaction effect was not significant ($\gamma = .001, n.s.$). In order to further understand the significant interaction effect at the first stage of the mediation, we conducted a simple slope analysis at ± 1 standard deviation of the mean through an online estimation tool presented in Preacher et al. (2006). We

found that simple slope at one standard deviation above the mean in HR learning practices was statistically significant ($\beta = .465, p < .01$). This suggests a stronger relationship of team learning and team resilience when there are higher levels of HR learning practices. Simple slope at mean levels ($\beta = .338, p < .01$) and one standard deviation below the mean ($\beta = .210, p < .01$) on the moderator were also statistically significant. However, the slopes showed a weaker relationship compared to slopes at high levels (+1 *SD* above the mean). Figure 1 graphically depicts this significant first-stage moderation effect.

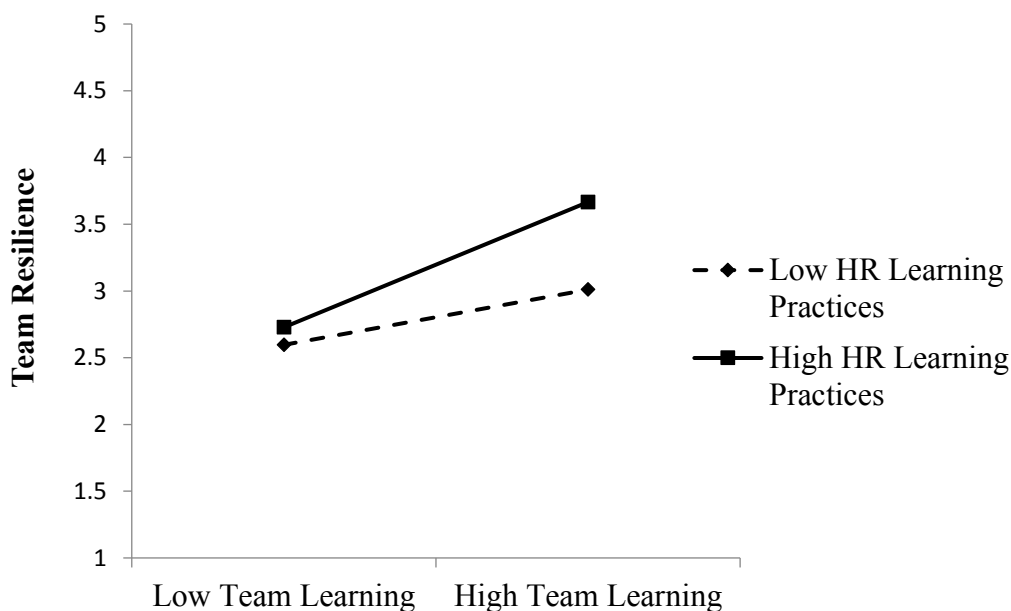


Figure 1. The moderation effect of HR Learning practices on the relationship between Team learning and team resilience

Since our main focus was on the moderated effect of the level 1 mediation, we tested the conditional indirect effect of team learning on team performance at different levels of the moderator (i.e., HR learning practices). Following the recommendation of Bauer et al. (2006) and Preacher et al. (2006), we obtained estimates of the indirect effect and confidence intervals

at high and low levels of the moderator (i.e., HR learning practices). At the higher value of HR learning practices (+ 1 *SD*), the indirect effect was .085 with a 95% CI of [.023, .154], whereas the indirect effect was .177 with CI of [.109, 260] when HR learning practices were low. Thus, the proposed moderated-mediation was supported, with the results revealing an indirect effect of team learning on team performance via team resilience for organizations in which HR learning practices are low and high; nonetheless, this effect is steeper at lower levels of HR learning practices. Figure 3 shows the proposed cross-level moderated-mediation model with significant standardized effects.

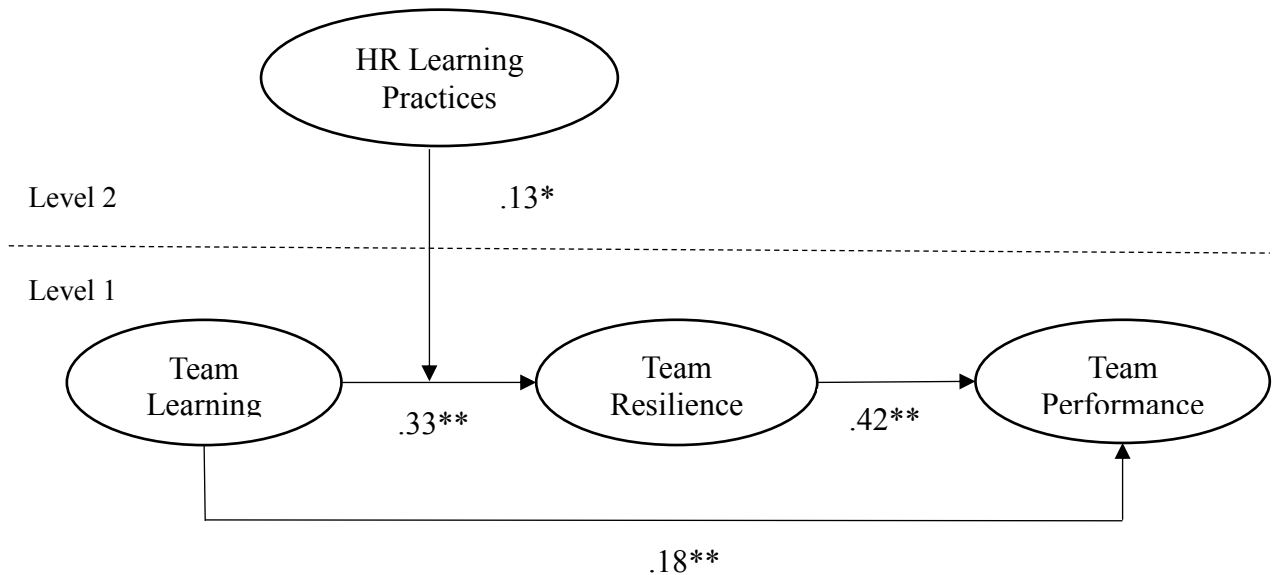


Figure 2. Hypothesized cross-level moderated mediation model

Discussion

The aim of this study was to explore team learning as an antecedent of team resilience, and the role of contextual factors such as HR learning practices in the development of team resilience. Based on the idea that systematic development of learning capabilities within individuals, teams and organizations contribute to the development of healthy and resilient organizations (Lengnick-Hall et al., 2011; Vogus & Sutcliffe, 2007), we argue that team resilience serves as a mediator on the relationship between team learning and team performance (Meneghel et al., 2016a, 2016b). Furthermore, considering the importance of HR learning practice for the promotion of learning and resilience (Lengnick-Hall et al., 2011; Salanova et al., 2012), we suggest that HR learning practices moderate the indirect effect between team learning and team performance via team resilience.

Results from our multilevel examination support these proposals. First, team learning was significantly related to team performance, providing support to Hypothesis 1. As well, team learning was statistically related to team resilience (Hypothesis 2). Team resilience was also related to team performance and serve as a partial mediator between the relationship between team learning and team performance (Hypothesis 3). These results provide important contributions considering the role of learning processes in teams to respond in a resilient manner to stressful situations. Although some authors have addressed the importance of learning at the team and organizational levels to build resilience (Lengnick-Hall et al., 2011; Sutcliffe & Vogus, 2003), no empirical evidence has been provided yet. To our knowledge, this is one of the first studies to address this relationship empirically from a multilevel perspective contributing to what we know in terms of developing resilience in teams (Meneghel et al., 2016a, 2016b).

Furthermore, and based on the theoretical proposal of Lengnick-Hall et al. (2011) and the heuristic HERO model (Salanova et al., 2012), we examined the cross-level interaction of HR learning practices on the relationship between team learning and team resilience. The findings showed that the relationship between team learning and team resilience is indeed stronger when HR learning practices are in place. In other words, organizations with higher levels of HR learning practices and team learning reported higher levels of team resilience. In order to understand the role of HR learning practices as boundary condition in the relationship of team learning and team performance via team resilience, we examined a moderated-mediation effect. The results also support this effect showing that the indirect effect of team learning on team performance was significant when HR learning practices were low and high. However, when HR learning practices were low, the indirect effect was stronger. This implies that if organizational learning practices are not present, teams tend to increment their team learning to become resilient and improve their performance. It may also suggest that having low resources from the organizational level in terms of learning practices may be a stressful condition for teams, which intensify their internal process to gain the necessary resources (Hobfoll, 2011).

Theoretical and Practical Implications

The present findings provide insightful contributions to the current literature in various ways. First, although resilience has become an important topic in organizational literature (West et al., 2009), still more investigation is needed to understand the possible precursors of resilience at work, especially at the team level (Sutcliffe & Vogus, 2003). This research expands on the literature available sustaining that team learning is an important precursor of team resilience. Previous research has evidenced the contributions of team positive affect, social resources and high quality interactions to develop resilience at work (Meneghel et al., 2016a, 2016b; Meneghel

Borgogni, et al., 2016). It is well documented that during crises learning is crucial (Edmondson, 2008; Wang, 2008), hence the capacity of teams to question assumptions, seek feedback, reflect upon results, and change accordingly are necessary to thrive and grow in difficult situations. For example, research has presented team learning as an important mechanism in technological implementation and stressful conditions (Edmondson, 2003; Edmondson et al., 2001).

In addition, investigating the role of team resilience as a mediating mechanism incorporates additional avenues for the study of team learning and performance. The present results provide evidence of a partial mediation, supporting the strong relationship between team learning and performance that has been reported in literature, especially when learning is needed (Edmondson, 1999; van Woerkom & Croon, 2009). Critical situations for organizations, may elicit learning processes which may lead to resilience for better adaptation and change, leading to performance improvements.

Second, this research contributes in providing initial empirical evidence to some of the propositions of Lengnick-Hall et al. (2011). Although they presented a complex and well-integrated model, no empirical evidence has examined any of their claims (Rodríguez-Sánchez & Vera, 2015). The authors even suggest the necessity of empirical evidence to understand which specific HR policies and practices are more strongly associated with the capacity for resilience. Using a multilevel approach, we advanced this research supporting the notion that HR learning practices are crucial for developing resilience. Results further the understanding of HR learning practices as boundary conditions to comprehend learning and resilience development at the team level.

Since capacity for resilience can be developed and managed (Lengnick-Hall et al., 2011; Rodríguez-Sánchez & Vera, 2015; Salanova et al., 2012), these results present useful

implications for practice in organizations. It is evident that organizations must make systematic, planned and proactive efforts to improve processes and outcomes at the employee, team and organizational levels. Organizational practices and resources (i.e., HR learning practices) will contribute to prepare workforce to survive in turbulent times. Developing competences, skills, allocating human capital at the right place (matching their abilities and interest), providing support from leadership, and other social and operational resources will provide team members to be better equipped to perform effectively in times of uncertainty and change.

As well, since team learning emerged as an important trigger of team resilience and team performance, especially under low HR learning conditions, organizations should make proactive approaches to promote collective learning among their members. Several suggestions have been posited in literature (Sessa & London, 2008). For example, the role of cohesion, interdependence, collective efficacy, trust, collaboration and psychological safety have been documented to have important implications to foster team learning (Edmondson, 2004; Van den Bossche, Gijssels, Segers, & Kirschner, 2006). Many of these triggers may be also developed through healthy organizations practices and resources (Llorens, Salanova, Torrente, & Acosta, 2013; Salanova et al., 2012). Organizations and managers should be aware of these elements and help to create a climate and conditions where sharing knowledge, taking risks, experimenting, reflecting and questioning burgeon within the social fabric of the team. Leadership support is important in this task providing social support and organizing work resources for teams to learn (Edmondson, 2003; Sessa & London, 2008).

Limitations and Future Research

Although this study presents some contributions, the results should be interpreted considering certain limitations. First, all variables were collected from the same source at the

same moment in time possibly leading to a bias due to common method. Empirical evidence from the one-factor test (Podsakoff et al., 2003) showed poorer fit in comparison with the four factors model (i.e., learning resilience, performance and HR learning practices). This provided support for the discriminant validity of the measures and that common method bias was not a deficiency in this dataset. Second, we could not control for other team or organizational characteristics that may affect the results (i.e., team type, diversity, team size, organizational sector) (Kozlowski & Ilgen, 2006). We did attempt to incorporate team size as a possible control in the model, however it was not statistically significant with the outcome variable, consequently we decided not to control for it (Becker et al., 2016). However, our sample included a wide range of organizations from diverse sectors and different types of teams providing strong support for the validity of these findings. Still additional research is needed that take into account various team and organizational features as well as the relationship in diverse cross-cultural context to assure generalizability.

Third, a multilevel approach allowed us to examine relationships at different levels of analysis. All of our measures were framed at the team or organizational level (Chan, 1998) and empirical and theoretical aggregation justification was provided. While this is a strength of this study, it is important to consider that organizational level variable was also aggregated perception from the individuals. Future studies should consider the use of more objective data regarding the availability of HR learning practices within the organization. Perceptions still remain relevant, since they allow to understand how individuals' perception of the presence of these practices within the organization relates to well-being (John & Björkman, 2015; Rego et al., 2009). In addition, objective performance measurement could be obtained from supervisors or clients to further understand the learning → resilience → performance link.

Finally, this study was conducted using cross-sectional data, consequently, no causal inferences could be drawn from the results. It is possible that learning and resilience may be reciprocally related and alternative models of this relationship still need to be tested. Crisis may elicit learning process that help individual, team and organizational to be resilient, but also this resilience capacity in itself promotes the acquisition of new skills, questioning assumptions and learning from failures and experiences. Further longitudinal research is still needed to understand the complex and variegated relationship between learning and resilience at organizations.

Conclusion

In the changing and turmoil context, organizations need resources to survive, thrive and grow. This research presents initial evidence of the role of learning resources and process to build resilience and improve performance. Based on Lengnick-Hall et al. (2011), propositions of HR practices and policies as relevant component to build resilience capacity in organizations, and using a multilevel approach in the study of healthy and resilient organizations (Salanova et al., 2012; Salanova et al., 2016), we found that team learning relates to team resilience and that team resilience partially mediate team learning and performance. Furthermore, HR learning practices help to promote team resilience when they interact with team learning, and they moderated the indirect effect of the relationship of team learning and team performance via resilience. These results suggest the relevance of providing learning opportunities at the team and organizational levels to build healthy and resilient organizations.

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CHAPTER 5

General Conclusions

The introduction of this work opened with the proposal of two questions: *What should organizations do to maintain optimal functioning at all levels? How can they invest in human capital to survive, thrive and grow?* The foundational premise of this thesis is that organizations should promote learning at the individual, team and organizational levels to maintain optimal levels of functioning and to be resilient in turbulent times. Based on the HERO Model and the literature on organizational learning capability, it is understood that organizational and managerial practices are key aspects to consider in the development of healthy, resilient and learning organizations. This thesis contains three empirical studies aimed to understand how learning is an important component to health and resilience in organizations. The empirical studies addressed learning at three different levels: individual (i.e., learning goal orientation), team (i.e., team learning, learning leader) and organizational (i.e., HR learning practices). Through this empirical test, this research examines how learning capabilities and resources promote well-being (i.e, psychological capital, satisfaction, resilience) and performance at these levels. The studies have been conducted with individuals and teams from different organizational settings (e.g., educational, service, industry). Models from each chapter were tested using diverse statistical methodologies (e.g., path analysis, structural equations modeling and multilevel analysis) and when possible, data from different sources collected at different times were used.

The main contributions of these results of studies is presented in Figure 1. In the following sections, these main contributions and their theoretical and practical implications are presented and integrated. Limitations and future research avenues are also discussed. This

integration aims to provide insightful information of the role on learning to build healthy and resilient organizations.

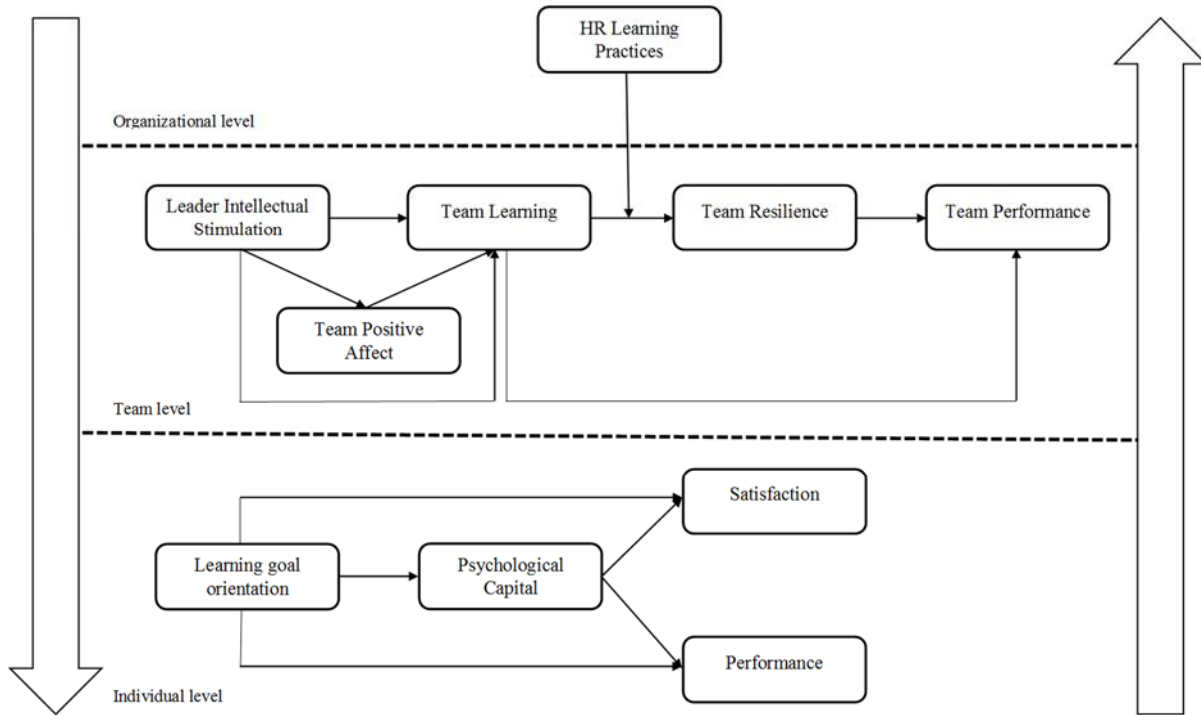


Figure 1. Integrated model with main findings

Individual Level

Achievement goal theory (Deweck, 1986) proposed that individuals have stable motivational tendencies to pursue goals based on their underlying beliefs about their abilities and these goal orientations influence how individuals approach, interpret and respond to achievement situations (Deweck, 1986; Pintrich, 2000; Vandewalle, 2003). Learning goal orientation refers to a focus in developing one’s competence by acquiring new skills, mastering new situations and learning from experience. Learning goal oriented individuals strive to improve their competences to master skills to goal attainment, and are more willing to take risks, make mistakes and ask for feedback, making them more suitable for success (Johnson, Shull, & Wallace, 2011; Payne et al.,

2007; Vandewalle et al., 2001). In the academic context, this motivational tendency seems crucial to develop the necessary competences to improve academic performance. Furthermore, other motivational and self-regulatory constructs may play a key role linking learning goal orientation with performance and well-being outcomes (Johnson, Shull, & Wallace, 2011; Payne et al., 2007; Vandewalle et al., 2001). The study proposes that psychological capital (PsyCap) is a proactive and motivational mechanism that may help to complete a task or reach a goal and provide students with psychological resources to cope with adverse circumstances in achievement situations (Riolfi et al., 2012).

This study was intended to answer the following three questions: (1) *What is the role of psychological capital as a positive motivational mechanism to link learning goal orientation and psychological well-being and performance?* (2) *Do learning goal oriented individuals perform and feel better?* and (3) *Is learning goal orientation a possible antecedent of PsyCap?* A mediation model of PsyCap on the relationship between learning goal orientation, satisfaction and performance was tested using path analysis with a sample of 768 students from a Spanish university. One strength of this study is that performance outcome was obtained from data provided by the university (GPA). The academic performance measure was collected at a different moment in time (4 to 5 months after participants' completed self-reported measures) providing compelling evidence of the relationship over time of LGO and PsyCap on academic performance.

Analysis from this study provides favorable answers to the proposed questions: (1) LGO relates to academic performance over time; (2) LGO relates to psychological well-being in terms of satisfaction; (3) PsyCap serves as a partial mediation in these relationships; (4) LGO is a possible antecedent of PsyCap in achievement situation, adding to the scarce literature that

considers PsyCap antecedents (Avey et al., 2011; Avey, 2014; Luthans, Yousseff-Morgan & Avolio, 2015). Previous research highlights the contribution of individual differences, especially self-core evaluations (i.e., self-esteem) and contextual factors (i.e., task, leadership) in the development of PsyCap. It seems that individual dispositions and motivational tendencies play a role in development of positive psychological states (Avey, 2014). Learning goal orientation may lead to increases in PsyCap; consequently, individuals with disposition to increment their mastery on skills and abilities, will experience more hope, resilience, efficacy and optimism, and be able to feel and perform better. This results provide additional avenues for research and practice suggesting alternative developable psychological mechanisms to improve effectiveness and well-being.

Chadwick and Raver (2015) proposed that goal orientations are important to achieve learning in organizations. The results from this study goes further suggesting that learning goal orientation also increments positivity and performance. From a multilevel perspective, collective goal orientation has been proven central to achievement and adaptation. For example, Bunderson and Sutcliffe (2003) found that team learning orientation encourages adaptive behaviors that lead to improve performances; thereby, appropriate emphasis on learning can have positive consequences for team effectiveness. Collective goal orientation refers to a shared perception of the appropriate way to behave in group achievement context (Chadwick & Raver, 2015). As such, and related to learning, mastery norms in groups encourage members to approach achievement setting as opportunities for increasing collective competence promoting team learning behavior such as feedback seeking, task-related discussion, and risk taking (Chadwick & Raver, 2015). This, according to the authors, occurs together with high tolerance for immediate setbacks and long-term improvements.

Although this study does not consider the collective level, results at the individual level might provide intriguing new questions for future research at the team level. Thereby, the relationship between LGO, PsyCap, performance and satisfaction should be explored at the collective level. Moreover, development of teams' norms and the composition of workgroups who are similar in their motivational tendencies will have implications for the team effectiveness and well-being.

Team Level

The second study moves to the team level and aimed to investigate two possible triggers of team learning: leaders' intellectual stimulation and teams' positive affect. From the transformational leadership approach, intellectual stimulation is perhaps the most commonly understudied dimension (Rafferty & Griffin, 2004); nonetheless it may have a powerful impact on the team learning process. Through intellectual stimulation, leaders continuously encourage team members to think and perform in new ways by challenging their own beliefs and supporting new and innovative ways of actions. Leaders also infuse positive psychological and affective states that help teams to increase both performance and well-being (Pirola-Merlo, Härtel, Mann, & Hirst, 2002; Salanova et al., 2012). Drawing from the broaden-and-build theory (Fredrickson, 2001), the study suggest that positive affective states enlarge capacities to generate new ideas, increase alternatives for action, improve member connectivity and contribute to the overall well-being. Thus, the following question guided this research: (1) *How is leadership intellectual stimulation related to team learning?* (2) *Is leadership intellectual stimulation related to positive affect in teams?* (3) *What is the role of team positive affect in the promotion of team learning?*

In order to answer these questions, a structural equation model at the team level was conducted with a sample of 130 team from 44 organizations. The main results derived from this

study answer auspiciously our research questions, with some interesting findings: (1) Leader intellectual stimulation significantly relates to team learning; (2) Team positive affect partially mediates the relationship between intellectual stimulation and team learning (3) Intellectual stimulation relates to team positive affect.

Intellectual stimulation encompasses a series of leadership behaviors which are closely related to team learning since they are aimed to challenge and encourage team members to reflect, think and act differently and in creative new ways. Supportive social environments are needed for team learning occurrence (Edmondson, 2003; Sessa & London, 2008). Leaders are social resources who motivate and empower teams to improve their collective ways of thinking and acting. These results advanced on previous research providing evidence of the influence of a specific leadership behavior on team and organizational processes (Nielsen & Munir, 2009). Specifically, it shows that intellectual stimulation relates not only to learning but to affective states at the team level. This represents an interesting finding, since intellectual stimulation is perhaps the least “emotional” component of transformational leadership. Nonetheless, when leaders stimulate team members intellectually, they may feel appreciated and valued eliciting positivity and affective well-being.

Bearing in mind that leaders may also influence team affective states, results of the mediation analysis showed that team positive affect relates significantly with intellectual stimulation and team learning, and that positive affect partially mediates this relationship. Most of the available research on team learning considers interpersonal or cognitive states as mediators (e.g., efficacy, psychological safety, collaboration) (Edmondson, 1999; Van den Bossche, Gijssels, Segers, & Kirschner, 2006; Van der Vegt & Bunderson, 2005). This research incorporates team positive affect as a possible precursor of team learning, based on the

capacity of positive affective states to broaden thinking and action repertoires. Team positive affect influences team and organizational dynamics such as idea-generation, creativity, adaptability to change, and facilitation or inhibition of learning process (Scherer & Tran, 2001). These results provide intriguing avenues for future understanding of how positive affect may have an influence on team learning through the development of other social or personal resources. It contributes to generate new questions regarding the mediating role of team positive affect between intellectual stimulations from the leader and other variables such as innovative and creative behavior/performance, helping behaviors (Tsai et al., 2009) or cooperation (Sekerka & Fredrickson, 2008).

Organizational Level

The third study moves at the organizational level to test the role of HR learning practices (e.g., abilities development and career promotion) in the development of team resilience and team performance. This study also expands on the consequences of team learning, considering team resilience as a proximal consequence to improve performance. Based on the HERO model (Salanova et al., 2012) and the propositions from Lengnick-Hall et al. (2001), the study proposed that HR learning practices are crucial for building resilience capacity in organizations. Specifically, two research questions were proposed: (1) *Are team learning and HR learning practices facilitators of team resilience?* (2) *What are the HR learning practices' (e.g., abilities and career development) role in the development of team resilience and performance?* To answer these questions, a multilevel moderated-mediation analysis was conducted using 825 employees nested in 200 teams from 56 organizations in Spain.

Results from these analyses provide interesting answer to these inquiries: (1) Team learning relates to team performance; (2) Team learning relates to team resilience; (3) Team

resilience relates to team performance and partially mediates the relationship with team learning; (4) HR learning practices moderate the relationship between team learning and team resilience; (5) HR learning practices moderates the indirect effect of team learning on team performance via team resilience.

As in Chapter 2, the results from this study indicate that learning relates directly to performance. This provides compelling results to suggest that learning, either at the individual or the team level, are crucial for adaptation and change on performance (Aguinis & Kraiger, 2009; Edmondson, 2008; Salas & Weaver, 2016). As well, learning could emerge in situations of errors, crises, and disruptions of routines (Edmondson, Bohmer, & Pisano, 2001; Tucker & Edmondson, 2003; Vogus & Sutcliffe, 2007; Wang, 2008). Under these circumstances resiliency could also emerge and protect teams from the negative effect of stressful events. Resilience is characterized by adaptive and flexible responses to adversity and with the capacity to “bounce back” with more strength and resources, leading to performance improvements. This supports the idea that learning is an important precursor of resilience.

Another important contribution of this chapter is the test of HR learning practices as boundary condition in the development of resilience and performance in teams. Organizations with higher HR learning practices and team learning reports more team resilience than those with low level of HR learning practices as perceived by team members. As well, HR learning practices moderated the indirect effect of team learning on team performance through resilience. When HR learning practices were low, the indirect effect was stronger. This implies that if organizations learning practices are not present, teams tend to increment their team learning to become resilient and improve their performance. It may also suggest that having low resources

from the organizational level in terms of learning practices may be a stressful condition for the teams, which intensifies their internal process to gain the necessary resources (Hobfoll, 2011).

Although resilience has gained considerable attention on organizational literature in recent years, no empirical evidence have been provided addressing the importance of learning to build resilience (Lengnick-Hall et al., 2011; Sutcliffe & Vogus, 2003). To our knowledge, this is one of the first studies to address this relationship empirically from a multilevel perspective contributing to what we know in terms of resilience development in teams (Meneghel et al., 2016a, 2016b). This research expands on the literature available sustaining that team learning is an important precursor of team resilience and contributes to provide initial empirical evidence to some of the propositions of Lengnick-Hall et al. (2011) supporting the notion that HR learning practices are crucial for developing resilience. However, it is possible that learning and resilience may be reciprocally related and alternative models of this relationship still need to be tested. Further longitudinal research is still needed to understand the complex and variegated relationship between learning and resilience in organizations.

Practical Implication

Taken together these results yield valuable insights for the development of healthy, resilient and learning organizations. Aligned with the notion of organizational learning capability, these results present facilitating factors to learning processes in organizations with relevant outcomes for both health and performance. Organizations must implement systematic, planned and proactive efforts to improve process and outcomes at the individual, team and organizational levels. Manager and organizational leaders must design strategies to offer learning opportunities to build healthy and resilient organizations. Based on the results of this thesis the following practical implications are proposed:

Implement HR healthy practices

Organizational practices and resources (i.e., HR learning practices) will contribute to prepare workforce to survive in turbulent times. Developing competences, skills, allocating human capital at the right place (e.g., promotions, matching their abilities and interest), providing support from leadership, appropriate information systems to provide data and information, and other social and operational resources will provide team members the skills to be better equipped to perform effectively in times of uncertainty and change.

Selecting individuals considering their learning orientation's motivational tendency may provide individuals with an intrinsic desire to develop their competencies to goal achievement. Moreover, learning goal orientation positively influences knowledge sharing (Matzler & Muller, 2011). As well, and following the Chadwick and Raver (2015) model, the emergence of a collective learning goal orientation may lead to teams that are ready to learn, to seek opportunities to develop new skills and knowledge, and motivated to invest in learning activities (Sessa & London, 2008).

In sum, organizations that implement healthy practices (i.e., HR learning practices) will influence the development of healthy teams and individuals (i.e., psychological capital, team resilience, team affect) and this will lead to positive team and organizational outcomes (i.e., team performance) (Salanova et al., 2012; Salanova et al., 2016).

Provide leadership support

Leaders should behave as facilitator and coaches providing learning opportunities and allocating appropriate resources for learning and performance. Leaders can be trained to become learning coaches fostering team members' knowledge, skills, idea generation and reflexivity and

minimizing suboptimal contributions of teams to achieve performance improvement. In addition, leaders are a valuable social resource to design and create effective teams contributing to performance improvement. As well, leaders contribute to improve their team positive affect climate, which may contribute to build enduring cognitive and social resources. Recent literature even suggest that leadership mastery or learning goal oriented instructions may create a psychological safety environment, which contribute to team learning and performance (Ashauer & Macan, 2013). This provides evidence that goal orientations are important at the individual as well as the team level of analysis (Porter, 2008).

Infuse positivity on individuals and teams

From a positive psychology perspective, intentional activities could be implemented aimed to cultivate positive feelings, behaviors and cognitions (Sin & Lyubomirsky, 2009). In accordance, some interventions programs have been implemented for the development of PsyCap to enhance positivity through short training interventions, and even web-based methodologies (Luthans, Avey, & Patera, 2008). These short innervations proved to have a significant impact on the development of PsyCap.

At the team level, positive affective climate are a key resource to energize and sustain transformation (Sekerka & Fredrickson, 2008). Team positive affect also contributes to create a context in which team members can feel free to exchange ideas, knowledge, and insights, reflect and criticize current assumptions, reflect upon feedback and generate new ways of thinking and action. In accordance, positivity broadens the scope of attention and cognition and lead to a widened array of thought and actions. According to the results from Chapter 3, support from the role of the leader infuses positivity in their teams.

Promote Resilience

In conjunction with evidence from previous studies, organizations should be aware that resilience can be developed deliberately. The current studies support the idea of investing in learning practices and process to build resilience. As well, previous evidence established that resilience can be developed through social resources (e.g., support climate, team coordination and high quality connections) (Meneghel, Borgogni, Miraglia, Salanova, & Martínez, 2016; Meneghel, Salanova, & Martínez, 2016b) and positive emotions (Meneghel, Salanova, & Martínez, 2016a). Based on the results provided in this thesis, team learning and organizational healthy practices, such as development of abilities and career promotion, create appropriate resources to build resilience.

Promote collective learning

Organizations should make proactive approaches to promote collective learning among their members. Several suggestions have been posited in literature (Sessa & London, 2008). For example, the role of cohesion, interdependence, collective efficacy, trust, collaboration and psychological safety has been documented to have important implications to foster team learning (Ashauer & Macan, 2013; Edmondson, 2004; Van den Bossche, Gijsselaers, Segers, & Kirschner, 2006). Many of these triggers may be also developed through healthy organizations practices and resources (Llorens, Salanova, Torrente, & Acosta, 2013; Salanova et al., 2012). Organizations and managers should be aware of these elements and help to create a climate and conditions where sharing knowledge, taking risks, experimenting, reflecting and questioning burgeon within the social fabric of the team. Leadership support is imperative in this task providing social support and organizing resources for collective learning in teams (Edmondson, 2003; Sessa & London, 2008).

Limitation of this Research

The findings from this set of investigations have some limitations that have to be taken into account in the interpretation of results. First, all studies were conducted using convenience sample, which might bias the results based on participants or team characteristics. However, samples consisted of individuals from different organizational sectors (i.e., educational, industry, service). Only Chapter 2 was based on a university student sample, although the inferences that can be drawn into the work and organizational context are limited, the intention is not to make a difference based on organizations and participants' roles within their system of activity. It was intended to conceptualize organizations in a broader sense, not limiting to working organizations, but incorporating those social conglomerates where people gather to achieve common goals.

Second, most studies in this thesis used cross-sectional and self-reported data, thereby, it is not possible to claim causal inferences. Data from additional sources, alternative models, as well as longitudinal research are still needed to support any possible causal effect. Only Chapter 2 included measures from different sources and collected at different moment in time (e.g., academic performance). This support a causal link between learning goal orientation and academic performance.

Third, the operationalization of team learning was based on the selection and adaptation of items using as framework the conceptualizations provided by Edmondson (1999) and Van der Vegt and Bunderson (2005). This measure was examined using factor analysis, in Chapter 3 and 4, which showed good psychometric properties with some evidence of discriminant validity. Future studies should use other established measures of team learning to sustain the relationships presented in this dissertation.

Finally, performance outcomes in two of the studies were self-reported and considered a unified version of in-role and extra-role performance. Nonetheless, results from all studies offered support to the relationship of learning and performance. Future investigations must incorporate additional measures of performance, from different sources, and considering the complex multidimensional nature of performance at the individual, team and organizational levels.

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