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Developing psychological capital and emotional intelligence in higher education: A field experiment with economics and management students

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ABSTRACT

This study examines the effectiveness of an educational intervention built upon the experiential learning model and positive psychology aimed at increasing management students' psychological capital (PsyCap) and emotional intelligence (EI) during higher education (HE). It also analyses how EI influences PsyCap and how both affect students' academic performance measured by self-reported grade point average (GPA). A field experiment was used employing a quasi-experimental design with a pre-test-post-test and a control group. Results confirm the effectiveness of the educational intervention in increasing management students' PsyCap and further influencing academic performance; however, the intervention was less effective in increasing students' overall EI. The findings of this paper contribute to the literature by examining the role of management education to develop students' psychological resources, which have key implications for graduates' academic success and future employability and institutions' engagement in responsible management education.

1. Introduction

Over the last decade the development of positive psychological resources, such as psychological capital (PsyCap) and emotional intelligence (EI), has received increased attention from academics and managers as well as Higher Education Institutions (HEIs), which have attempted to address them in university curricula (e.g., Gilar-Corbi, Pozo-Rico, Sanchez, & Castejon, 2018). These psychological resources are of interest because they can play a key role in providing a competitive advantage for students' academic performance as well as future graduates' employability (Succi & Canovi, 2019) and career success (Luthans et al., 2014). A wide body of research has demonstrated the positive impact of these psychological resources on individual performance (Avey et al., 2011; O'Boyle et al., 2011),

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job satisfaction (Miao et al., 2017), career success (Rode et al., 2017), and wellbeing (Lupş;a et al., 2020), across countries (Cinque, 2016), industries (Wu & Nguyen Khanh-Van, 2019) and occupational roles (Newman et al., 2014); thereby validating their paramount importance and high demand (Bonesso et al., 2020).

PsyCap encompasses four psychological attributes: self-efficacy, optimism, hope, and resilience (Luthans, Youssef, & Avolio, 2007); and EI indicates the ability to identify, manage, and control ours and others' feelings and emotions to guide behaviours (Salovey & Mayer, 1990). Both are relevant to overcoming challenges university students face and form the basis of coping with the hurdles of graduates' personal and professional futures.

Although research has shown that PsyCap and EI develop during higher education and can be taught in the classroom (Luthans et al., 2008; Luthans et al., 2014; Gilar-Corbi, Pozo-Rico, Sanchez, & Castejon, 2018; Gilar-Corbi et al., 2019), theoretically, a gap exists in our knowledge in relation to the effectiveness of Higher-Education (HE) interventions to develop students' PsyCap and EI. Earlier accounts have assessed PsyCap and EI development separately but the effectiveness of educational interventions targeting both has been overlooked (Bonesso et al., 2020). Most studies do not provide sufficient detail about training strategies and content of EI interventions, or whether overall EI or EI-related competencies and attitudes, such as motivation, coping, empathy, and social skills are addressed (Mattingly & Kraiger, 2019). Furthermore, the interaction of PsyCap and EI and how both affect students' academic performance has been widely disregarded. Previous research has overlooked how EI changes over time and can be an antecedent of overall PsyCap.

To the extent that PsyCap and EI are key psychological resources that are open to change and development (Luthans, Youssef, & Avolio, 2007), one cannot disregard how they develop through HE in general, and particularly in Management education. These competencies are in high demand because they play a crucial role in preparing individuals for the challenges of everyday life (Blázquez et al., 2018; Bonesso et al., 2020), and in favouring employability and career success (Brunello & Schlotter, 2011; Succi & Canovi, 2019).

To address these research gaps, this study employs a field experiment and analyses the effectiveness of an educational intervention that aims to increase students' personal and social competencies during HE. This intervention builds upon the Experiential Learning Theory (ELT; Kolb & Kolb, 2017) and follows a positive-psychology approach to develop overall PsyCap and EI. Changes following the training of PsyCap and EI were previously studied, but these competencies were assessed separately. Instead, this study addresses these competencies in a control versus experimental group of HE students by using a pre-post survey design. Participants were second-year students enrolled in the Bachelor of Business and Management (experimental group) and the Bachelor of Economics (control group) from a public university in Europe. These groups were targeted because both attended the same faculty at the same time and have similar educational backgrounds (i.e., admission requirements) and geographic origin, as well as similar extracurricular activities facilitated by the university. Both groups followed an equivalent academic curriculum for the main technical skills but differed in the training of psychological resources. The main curricular difference between the two bachelor's degrees refers to the enrollment in two-semester courses on Personal and Social Competencies with 3 ECTS credits each (PSC I and PSC II) and that are mandatory for second-year students of the Bachelor's in Business and Management, but not required for the students of the Bachelor's in Economics (for details see Appendix 1).

Given these characteristics, the two classes form comparable, albeit non-random, experimental and control groups. Therefore, one expects the development of students' PsyCap and EI during higher education studies (i.e., through time), and after the two-semester courses aimed to develop the personal and social competencies of the management students. Following previous research (e.g., Gilar-Corbi, Pozo-Rico, Sanchez, & Castejon, 2018; Lupş;a et al., 2020; Luthans et al., 2014; Mattingly & Kraiger, 2019) it is likely to observe an increase in PsyCap and EI in both groups, ensuring maturation and formal education, but that growth will be higher in the Bachelor's in Business and Management students (experimental group), who were subject to specific training.

This study contributes to the literature in several ways. First, it extends the application of the experiential learning theory (Kolb & Kolb, 2017) and the positive-psychology lens (Linley et al., 2006) to the HE context by showing that PsyCap and EI are teachable through an experiential learning approach. This study engages in earlier discussions on the importance of experiential learning to academic management education (e.g., Brook & Pedler, 2020) by providing further empirical evidence. Earlier research has not addressed the effectiveness of educational interventions aimed to develop both competencies simultaneously, which is highlighted here as per earlier calls (Lupş;a et al., 2020).

Second, the findings provide support for conceptualizing PsyCap as a developmental state (Luthans, 2007a; Luthans et al., 2014) that is permeable to development during HE. Furthermore, the findings extend our understanding of EI development through Management Education and identify the dimensions of EI that are less malleable to change. This input is critical to design more effective intervention programs. The results of the current study have the potential to inform future curricular changes pertaining to responsible Management Education programs and aimed at developing PsyCap and EI through formal education. This is key for the efforts of socially responsible HEIs (Parkes et al., 2017) strengthening their commitment to education as a 'common good' (UNESCO, 2020) and seeking to increase graduates' employability and future career success (Blázquez et al., 2018; Cinque, 2016).

Third, the findings also show students' EI is a key antecedent of overall PsyCap beyond individual differences and specific training. Consequently, these findings extend our previous knowledge of the emotional antecedents of academic PsyCap, which have been clearly disregarded (Newman et al., 2014). Hence, understanding how EI in general, and its dimensions separately, can influence overall PsyCap is critical to the customization of formal educational initiatives, and suggests promising paths for future intervention.

Fourth, this research provides insights into the relationship between students' psychological resources, such as overall PsyCap and EI, and self-reported academic performance. Unexpectedly, the findings do not lend support to a positive association between students' EI and GPA, but instead reveal that self-encouragement is positive but some other dimensions (e.g., empathy and understanding one's own emotions) can deter students' academic performance. Although the findings are not generalizable, they open new research

avenues examining the broader impact of PsyCap and EI. In fact, management education is uniquely positioned to provide sustainable solutions for lifelong learning that impact society. Such results have important practical implications in assisting business schools and faculties to design formal academic programs that encourage the development of students' personal and social competencies necessary for lifelong learning.

The rest of the paper reviews the literature and describes current perspectives in developing PsyCap (e.g., Lups;a et al., 2020) and EI (e.g., Mattingly & Kraiger, 2019) through experiential learning (Kolb, 1984). This theoretical framework grounds the hypotheses that an increase of these competencies through the transformation of students' experiences that occur in specific educational programs during HE have a positive effect on students' academic performance. The following sections present the methodology, including a description of the pre-test-post-test design, sample, and procedures of data analysis. Results are then presented and discussed, including study limitations and main theoretical and practical contributions.

2. Theoretical background

Experiential Learning Theory (ELT) defines learning as "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of "grasping and transforming experience" (Kolb, 1984, p. 41). This learning model encompasses two ways of gaining experience: (1) Concrete Experiences (CE); and (2) Abstract Conceptualization (AC); and two modes of transforming experience; (3) Reflexive Observation (RO), and (4) Active Experimentation (AE) (Kolb et al., 2001). According to this four-stage learning cycle, one learns and develops psychological resources, such as PsyCap and EI, through concrete experience and/or observation followed by reflexive revision and identification of one's strengths, beliefs, and behaviours. Then, individuals need to test and progressively replace the ineffective beliefs and actions with more realistic, constructive, positive ones.

Although people differ in learning styles (Kolb et al., 2001), this model provides guidance for designing successful education and training processes (Kolb & Kolb, 2017). The present analysis examines the effectiveness of an educational intervention that was designed through the lens of ELT to develop management students' PsyCap and EI (for details see Appendix 1). The emphasis was on the learning flexibility of students through concrete experience, observation, reflection, and positive (re)conceptualization.

2.1. Psychological capital

Psychological capital (PsyCap) is a positive personal resource that can lead to individual and organizational success (Lups;a et al., 2020). According to Luthans (2002), PsyCap is a combination of four personal characteristics: self-efficacy, hope, optimism, and resilience. *Self-efficacy* encompasses people's beliefs in their ability to mobilize motivational and cognitive resources to attain a desired course of action (Luthans, 2002); *hope* involves the ability to recognize, clarify, and manage the way to success; *optimism* corresponds to a comprehensive expectancy of a positive end result (Luthans, 2002), and *resilience* is the ability to face and recover from problems, conflicts, lack of success or situations that imply increased responsibility (Luthans, 2002).

Previous research has found support for several boundary characteristics of PsyCap (Avey et al., 2011) and refer to an individual multidimensional construct that is domain-specific and permanent over time (i.e., PsyCap is more open to change than personality but is more stable than emotions). PsyCap is also measurable by self-report and is predictive of performance (Avey, 2014). Given these attributes, one can determine academic PsyCap so that a student with a high PsyCap is (i) optimistic and self-effective regarding personal and academic goals; (ii) considers many ways to solve a problem; and (iii) is resilient in pursuing them (Luthans et al., 2014). To the extent that PsyCap is open to change and development (Luthans, Youssef, & Avolio, 2007), HEIs can play a key role in developing students' PsyCap, which in turn might enhance academic performance (Luthans et al., 2014).

Prior research has shown that PsyCap is significantly associated to individual and organizational outcomes, such as job performance and satisfaction or psychological well-being (Avey et al., 2011; Luthans, Avolio, et al., 2007). These outcomes have raised academics' and practitioners' interest in the activities and training programs likely to improve PsyCap. However, most attempts to assess the impact of these interventions have been dimension specific and have overlooked the interventions aimed to enhance the overall construct. This research gap was addressed in a recent meta-analysis of the effectiveness of PsyCap interventions (Lups;a et al., 2020) that included the effect of PsyCap on well-being and performance. For the 41 studies revised, 17 were on students and the interventions' length ranged from one day to ten months, with an average length of 33.3 days. All studies used a control group in which the setting of the intervention was mostly in a group and delivered by a trainer (Lups;a et al., 2020). The effect size for increasing PsyCap in educational and work settings was significant but small, and the highest effectiveness was found for enhancing self-efficacy and resilience, both displaying significant and medium effect size.

Drawing on these findings and addressing earlier calls (Lups;a et al., 2020), this study adopts an omnibus PsyCap perspective to examine the impact of a formal educational intervention aimed at increasing management students' overall PsyCap as a personal resource. This research assesses whether such intervention is effective in developing the overall PsyCap of an experimental versus a control group. One expects the educational intervention to increase students' PsyCap from the pre-test to the post-test (Luthans et al., 2008, 2014). Since Economics students from the control-group do not benefit from any treatment, any increase between pre- and post-test measures is expected to be small and related to students' development through time and exposure to HE (Thompson et al., 2020). The following hypothesis is then advanced:

H1: The scores of PsyCap (a) will increase between the pre-test and the post-test for both the control and the experimental groups; but (b) the change of PsyCap between the pre-test and the post-test will be higher for the experimental group.

Given that PsyCap is a higher order construct (Luthans et al., 2014) that predicts performance better than any of its individual components, this study examines whether students' overall PsyCap influences academic performance measured by students' GPA. The

extant literature provides support for a positive but moderate relationship between the dimension of self-efficacy and academic performance (Honicke & Broadbent, 2016). Luthans, Avolio, et al. (2007) found overall PsyCap of business students associated to students' grade point average; and Lupş;ã et al. (2020) also documented secondary outcomes of interventions aimed at increasing people's PsyCap. On whole, they observed a weak but positive effect of PsyCap increase on job performance (Lupş;ã et al., 2020). However, the outcomes of most interest were related to the workplace, such as work engagement (e.g., Akkermans et al., 2015) and job performance (e.g., Avey et al., 2011) as only a small number of studies reported the effects of overall PsyCap on academic outcomes. Furthermore, these studies assessed the impact of only one dimension of PsyCap at a time.

Starting from the existing evidence of a positive relationship between PsyCap and job performance (Avey et al., 2011) as well as management students' separate dimensions of PsyCap and self-reported performance (Luthans, Avolio, et al., 2007), one would expect a positive association between students' overall PsyCap and academic performance. Therefore, the following hypothesis is proposed:

H2: There is a positive association between overall PsyCap post-test scores and students' GPA that is stronger for the experimental group.

2.2. Emotional Intelligence

Despite the generalized use of Emotional Intelligence (EI) in research, there is no consensus towards a common definition. Some authors envision EI as an *ability* that reflects a person's capacity to monitor their own emotions and to perceive and respond appropriately to the emotions of others (Salovey & Mayer, 1990). This view of EI mobilizes people's cognitive skills to perceive, understand, and use emotions as a form of emotional expression and self-motivation in interactions with others (Mayer et al., 2008). Another primary model of EI provides a *mixed conceptualization* that incorporates motivation, personality, temperament, and social skills, thus extending the concept beyond emotion awareness and management to influencing the way people cope with complex and difficult situations (Cho et al., 2015).

The conceptualization of EI is relevant because it affects its measurement and efforts to train and develop EI. According to Mattingly and Kraiger (2019, p. 141) "the current state of the literature may be better characterized as a continuum of more ability-based to more mixed-model-based". In revising the literature to answer the question of whether EI can be trained, Mattingly and Kraiger (2019) considered a total of 56 studies completed between 2000 and 2016 examining the effectiveness of training interventions aiming to increase EI. From these, only 15 studies included university students' samples, and none included a training intervention in the context of an EI course for curricular credit as is the case of this research. Most studies used: (i) self-report EI measures; (ii) treatment and control groups; and (iii) collected only a single post-test score immediately after training (Mattingly & Kraiger, 2019). Overall, the authors found a moderate positive effect for EI training, but no other differences related to the gender of the trainees or the training properties (e.g., lecturers, feedback, discussions etc.). The authors concluded that training is moderately effective in increasing EI self-reported scores and this change is robust across participants' gender and type of EI measure. With respect to EI interventions in the educational context, immediate post-training measurement has shown the effect of training. For example, Gilar-Corbi, Pozo-Rico, Sanchez, and Castejon (2018), and more recently Thompson et al. (2020), found that EI can be developed through the curriculum of a one-year MBA. Furthermore, Gilar-Corbi et al. (2019) tested the effectiveness of a curricular intervention during HE studies aimed at increasing students EI in three different countries (i.e., Spain, Moldavia and Argentina). The findings showed a significant EI increase in the post-test and for all experimental groups, thus supporting the presumption of EI cross-cultural development through training.

The present study adopts a mixed conceptualization of EI (Bar-On, 1997; Goleman, 1996; Rego & Fernández, 2005) pertaining to students' skills and competencies related to the management of one's own emotions and others' emotions. It assumes that EI includes, in addition to mental abilities, other skills and competencies (e.g., empathy) subject to improvement through both maturation and training. Therefore, the courses' design of PSC I and PSC II followed this view and targeted students' cognitive knowledge about EI mainly through attendance of the first course (PSC I). This included instructional methods aiming at increasing related skills, such as understanding one own's and others' emotions, empathy, self-encouragement, and self-control against criticism.

Given previous findings, one can expect HE to stimulate the development of EI among bachelor's students, both for the experimental and the control groups, which may be traceable by the EI changes in both groups. In addition, if the educational intervention is effective, the pre-test EI scores for the experimental group will be significantly different and higher because this group had received specific EI training in the course unit of PSC I. Furthermore, if this EI change remains stable over time, the post-test scores of EI for the experimental group will be significantly higher also. The following hypothesis is then advanced:

H3: The scores of EI (a) will increase between the pre-test and the post-test for both the control and the experimental groups; but (b) the baseline pre-test EI scores of the experimental group will be significantly higher than the pre-test EI scores of the control group; and (c) this difference will remain in the post-test.

To date, limited research has explored the effectiveness of educational interventions aimed at increasing both PsyCap and EI in the HE context. As shown, earlier research examined the improvement of EI during an MBA (Boyatzis, 2006; Boyatzis et al., 2002; Thompson et al., 2020), but most studies did not consistently assess how EI can be an antecedent of overall PsyCap. Instead, this relationship was explored in the work context by Mellão and Mónico (2013) with Portuguese employees. They found that all six dimensions of EI were positively and moderately correlated with workers' PsyCap and the association was stronger for the EI dimensions of understanding one's own emotions and self-encouragement. A significant correlation between EI and PsyCap was also found among Indian manufacturing professionals, and EI was found to moderate the relationship between PsyCap and organizational citizenship behaviours (Pradhan et al., 2016). Drawing upon this evidence, one would expect a positive association between EI and PsyCap pre-test scores. Furthermore, if the educational intervention of PSC I is effective at increasing management students' EI scores, then the

EI change will remain high and stable over time for the experimental group and a positive association between EI and PsyCap post-test scores will also be observed. Therefore, the following hypothesis is advanced:

H4: The scores of EI are positively associated to the scores of PsyCap, respectively in the (a) the pre-test; and (b) the post-test.

Starting from the existing evidence of a positive relationship between EI and positive life outcomes, such as job satisfaction (Miao et al., 2017), job performance (O'Boyle et al., 2011), and career success (Rode et al., 2017), one expects a positive association between students' EI, and academic performance as measured by students' GPA. The results from EI studies in the educational context have been equivocal regarding this relationship. Several studies reported a positive association (e.g., Gilar-Corbi, Pozo-Rico, Pertegal-Felices, & Sanchez, 2018), others reported no association between total EI and students' academic performance (e.g., Parker et al., 2004; Pope et al., 2012), and still others found no link between specific EI dimensions and final students' average percentage mark (e.g., Pope et al., 2012). As these findings can differ depending on the type of assessment used and the time period to report the impact of EI change, one assesses this link for the pre-test and post-test scores. If the association between EI and GPA exists, it will be observable immediately after EI training (i.e., after PSC I) and will remain observable in the post-test (i.e., after PSC II). Therefore, the following hypothesis is proposed:

H5: There is a positive association between overall EI and students' academic performance (GPA), respectively in (a) the pre-test and (b) the post-test; and this association is stronger for students receiving EI training (i.e., experimental group).

3. Methodology

3.1. Field experiment

A quasi-experimental design with an experimental and a control group was adopted. Students attending the mandatory courses of PSCI and PSCII from the Bachelor's in Business and Management formed the experimental group, and the students from the Bachelor's in Economics who did not attend the courses constituted the control group. All students were enrolled in the same public Southern European college and were informed of a research project addressing their personal and social competencies. The study involved data collection in two distinct periods for which they were asked to provide an identifiable but anonymous code. Before answering the surveys, an informed consent was requested. Qualtrics software was used to answer the survey online, supplemented by a similar paper survey for participants who preferred this format.

Both the control group and experimental group completed a pre-test questionnaire in February (after PSC I and before PSC II) and a post-test in May (after PSC II) with a 14 weeks' time interval. The same survey measured the EI and PsyCap competences in the two groups and for the pre-test and post-test. The effectiveness of the intervention was then evaluated by comparing the pre-test and post-test scores of the experimental and control group. This procedure follows a non-equivalent control group pre-test post-test design that is common in field experiments (Campbell & Stanley, 2015).

3.2. Participants

The study's total population consisted of 475 students enrolled in the second year of the two Bachelor programs: respectively, 155 Business and Management students and 320 Economics students, all of whom were targeted in this research. At the pre-test, 304 students answered the survey (64% response rate) and the retention rate from the pre-test to the post-test was 54%.

A total of 165 university students participated answering both surveys: 89 students were from the Bachelor's in Business and Management and composed the experimental group, and 76 were from the Bachelor's in Economics forming the control group. Of the

Table 1
Sample demographics for experimental condition.

	Total Sample				Experimental Group				Control Group			
	<i>n</i>	%	<i>M</i>	<i>SD</i>	<i>n</i>	%	<i>M</i>	<i>SD</i>	<i>n</i>	%	<i>M</i>	<i>SD</i>
Age	165		20.08	1.38	89		19.92	1.25	76		20.26	1.52
GPA	165		13.95	1.70	89		14.06	1.64	76		13.82	1.76
ECAs	165		2.73	1.62	89		2.85	1.63	76		2.58	1.61
Gender												
Female	98	59.4%			54	55.1%			44	44.9%		
Male	67	40.6%			35	52.2%			32	47.8%		
Father education												
No-HE	99	61.1%			61	61.6%			38	38.4%		
HE	63	38.9%			28	44.4%			35	55.6%		
Mother education												
No-HE	82	50.9%			53	64.6%			29	35.4%		
HE	79	49.1%			35	44.3%			44	55.7%		
Family net income												
<2.000€/Month	79	51.3%			50	63.3%			29	36.7%		
≥2.000€/Month	75	48.7%			35	46.7%			40	53.3%		

Notes. GPA- Grade Point Average, ECAs - Number of Extracurricular Activities (participation in), HE - Higher Education, No-HE -No Higher Education.

total, 59% were women and 41% were men, with an average age of 20.08 years old with a standard deviation of 1.38. No significant demographic differences were found between participants who completed post-test measures and those who withdrew after the pre-test, so there are no valid reasons to expect selection bias. Additionally, there were no significant differences between the final experimental and control group in terms of age ($F(1,164) = 2.525, p > 0.05$), gender ($\chi^2 = 0.131, p > 0.05$), and engagement in extracurricular activities $F(1, 160) = 1.182, p > 0.05$. However, the groups differed in parents' education ($\chi^2 = 4.586, p < 0.05$ and $\chi^2 = 6.710, p < 0.01$, respectively for father and mother education), and family net income ($\chi^2 = 4.300, p < 0.05$). Overall, the students in the control group (i.e., Economics students) belong to better educated and wealthier households. Table 1 shows the sociodemographic data of the sample.

3.3. Educational intervention

The educational intervention followed in the present study includes two course-units on personal and social competencies (i.e., PSC I and PSC II) of 3 ECTS credits each. These course-units are part of the second-year core curriculum of the Bachelor's in Business and Management and are not included in the curriculum of the Bachelor's in Economics. These courses follow a positive-psychology approach and use mixed methods to develop students overall PsyCap and EI through the four-learning stages of the ELT (Kolb et al., 2001): Abstract Conceptualization (AC), Active Experimentation (AE), Concrete Experience (CE), and Reflexive Observation (RO). Both course units develop other non-cognitive skills through role-playing and team assignments that include interpersonal communication, teamwork, and influencing skills. Appendix 1 details the strategies and content of each course unit.

The sessions of PSC I (Fall semester) include strategies and specific training on EI that involve perceiving, understanding, expressing, and managing one's own and others' emotions. The classroom activities often had multiple purposes. For example, in the first module on critical thinking, sessions started with a 10-min theoretical lecture (AC) about the subject (e.g., argument building, common fallacies, etc.) followed by students' presentations of a dichotomic topic selected the previous week (e.g., euthanasia, drug legalization, bullfights, etc.). For each topic, two students presented opposing viewpoints (AE). These oral presentations took no more than three minutes and students could not choose the viewpoint they presented as an opportunity to build and expose arguments outside their comfort zone (CE). In each session five pairs of students presented, and colleagues provided constructive feedback (RO) on their performance in terms of content and form. Although the primary objective was to develop participants' critical thinking through argument (de)construction, this activity also provided an opportunity to practice empathy and public speaking. Class activities were highly anticipated and enjoyed by students who felt excited and challenged by the tasks.

The sessions of PSC II (Spring semester) consist of lectures and activities targeting PsyCap aimed at building confidence (self-efficacy), making positive attributions (optimism), persevering towards goals (resilience) and, when necessary, redirecting paths to goals to succeed (hope). As an illustration, employment strategy was the theme of module 4 (Appendix 1). This module's AC included an initial lecture on key aspects of the recruitment and selection process. Active experimentation (AE) followed as students faced typical interview questions and did a personal job-pitch. Further, students shared their own experiences of recruitment and selection (e.g., for student unions), which provided the CE component. Reflexive observation (RO) was encouraged both in the debriefing part of the session as well as through a written assignment students had to present in the last module session. This individual assignment included interviewing someone performing their "dream job" to find out: (i) how they got the job, (ii) what their story was, and (iii) what were the key aspects/competencies for getting a similar position. Then, other modules followed actioning the development of PsyCap.

In this study changes in the scores of EI and PsyCap were compared for the pre-test, revealing both the effect of HE and PSC I. Finally, comparisons between the control and the experimental groups on post-test scores revealed the effect of the entire educational intervention.

3.4. Measures

All measures used in this study were from instruments previously published in academic journals undergoing the psychometric evaluation process.

Psychological Capital. The four dimensional 24-item PCQ questionnaire was used. This is a self-report measure developed and empirically validated by Luthans, Youssef, and Avolio (2007) and adapted to the academic domain (Luthans et al., 2014). Sample items include: "There are lots of ways around any problem concerning my schoolwork", and "I feel confident setting targets/goals for my schoolwork". The items were answered on a six-point Likert scale ranging from (1) *Strongly disagree* to (6) *Strongly agree*. The internal reliability of the 24-item scale measured by the Cronbach alpha for the pre-test and the post-test was 0.87 and 0.93 respectively, which are excellent and comparable to overall academic PsyCap of Business students as reported by Luthans et al. (2014).

Emotional Intelligence. This study employed the scale of overall EI translated and adapted locally by Rego and Fernández (2005) and drawing on a mixed conceptualization of EI. This scale contains 23 items answered on a seven-point Likert scale ranging from (1) *The statement does not apply to me at all* to (7) *The statement applies to me completely*. Although this scale groups EI into six dimensions (empathy, self-control against criticism, emotional self-control, self-encouragement, understanding one's own emotions, and understanding others' emotions), only the full measure was computed to shorten the analysis. This scale was locally adapted with a large sample of undergraduate students and has been successfully used in other studies of EI having strong psychometric qualities (e.g., Rego et al., 2007; Rego et al., 2010). The internal reliability of the 23-item scale measured by the Cronbach alpha for the pre-test and the post-test was 0.83 and 0.86 respectively, which are good and comparable to similar studies (e.g., Rego & Fernández, 2005).

Academic Performance. Academic performance refers to students' self-reported grade point average registered during the post-test. A 20-point grading scale is used, with 20 the highest grade possible and 9.5, rounded upwards to 10, the minimum grade for passing.

Other variables. Based on earlier research on the individual variables related to PsyCap (Avey, 2014) and EI (Mattingly & Kraiger, 2019), several demographic variables, such as age, gender, parents' education, family income, and prior engagement in extracurricular activities, internships, and work experience were included as control variables. Age was computed in years. Previous internships and work experience were reported by total duration in each activity and computed in months. Extracurricular activities were computed by the total number of activities students were engaged in (e.g., sports, volunteering, sororities). Gender, parents' education, and family income were dummy-coded (correspondingly 0 = female, 1 = male; 0 = less than higher education; 1 = higher education; 0 = monthly net income lower than 2.000€; 1 = monthly net income equal or higher than 2.000€).

3.5. Data analyses

In addition to the descriptive and correlational analyses, several general linear models of repeated measures were computed. The demographic variables correlated with the outcomes entered the analysis as covariates. The scores of EI and PsyCap from the pre-test entered also as covariates in the analyses for the post-tests (Dugard & Todman, 1995) thus providing an appropriate and informative analysis on the effects of the intervention. Finally, hierarchical regression analyses were computed to determine whether EI pre-test scores predicted post-test PsyCap scores and how both related to students' academic performance.

4. Results

Table 2 presents the correlations among the main study variables. The results for the pre-test are shown above the diagonal and the results for the post-test are shown below the diagonal.

The data indicates that except for students' age, which was negatively correlated with PsyCap, EI and academic performance (GPA), no other individual characteristic was correlated with the criterion variables. PsyCap and EI are moderately intercorrelated and both are associated with academic performance although EI pre-test score is negatively associated with GPA.

To test the hypotheses, subsequent multivariate analyses (within and between groups) were computed. Table 3 shows the differences in PsyCap and EI scores (i.e., between-subjects' effects) in the pre-test and post-test for the experimental and control groups.

Changes in total PsyCap and EI scores (i.e., within-subjects' effects) for the experimental and control groups are shown in Table 4. Following Dugard and Todman's (1995) recommendations, the scores of PsyCap and EI from the pre-test entered as covariates in the analyses for the post-tests to determine the true effect of the educational intervention.

Hypothesis 1. predicted that the scores of PsyCap (a) would increase between the pre-test and the post-test for both the control and the experimental groups (i.e., a within-group effect); and (b) the change of PsyCap between the pre-test and the post-test would be higher for the experimental group (i.e., a between-groups effect). As shown in Table 3, the PsyCap scores of the two groups were significantly different: the students in the experimental group scored significantly higher in PsyCap both in the pre-test ($F(1, 164) = 5.789, p = 0.017, \eta^2 = 0.03$) and in the post-test ($F(2, 163) = 83.969, p = 0.000, \eta^2 = 0.51$). The results from Table 4 confirm that students' PsyCap increased from the pre-test to the post-test in both groups and the extent of the change was higher for the experimental group (respectively for the experimental group $F(1, 89) = 61.392, p = 0.000, \eta^2 = 0.411$, and the control group $F(1, 76) = 5.908, p = 0.017, \eta^2 = 0.073$). Overall, the educational intervention explained 4.1% of the variance of the post-test PsyCap scores in addition to the 47% explained by the baseline PsyCap scores. These results support H1.

Hypothesis 2. predicted a positive association between overall PsyCap post-test scores and students' GPA stronger for the experimental group. Table 5 presents results for the regression analysis for the hypothesized relationships between students' post-test scores of PsyCap and GPA and taking the educational intervention as input.

As shown in Table 5, students' age is a negative predictor of GPA ($\beta = -0.257, p < 0.001$) and post-test PsyCap is a positive predictor ($\beta = -0.257, p < 0.001$), thus explaining students' GPA above and beyond the educational intervention. Hypothesis 2 is only partially supported as overall PsyCap is moderately associated with students' academic performance, but this link is not stronger for

Table 2
Intercorrelations for study variables disaggregated by pre-test and post-test.

Variable	1	2	3	4	5	6	7	8	9
<i>Respondents' Demographics</i>									
1. Age		-0.04	0.12	-0.12	-0.02	0.02	-0.024	0.015	-0.29**
2. ECAs	-0.03		0.05	0.14	0.14	0.07	0.10	0.10	-0.12
3. Gender	0.08	0.05		0.08	0.00	0.05	0.01	-0.13	-0.04
4. Father education	-0.12	0.14	0.08		0.40**	0.38**	0.05	0.04	-0.09
5. Mother education	-0.04	0.14	0.00	0.40**		0.44**	-0.11	0.03	-0.14
6. Family net income	0.05	0.07	0.05	0.38**	0.44**		-0.03	0.05	-0.14
<i>Criterion</i>									
7. Psychological capital	-0.09	0.10	0.01	-0.08	-0.14	-0.07	(0.93)	0.42**	0.15*
8. Emotional Intelligence	-0.08	0.07	-0.15	0.01	0.09	0.02	0.58**	(0.86)	-0.21*
9. GPA	-0.22**	-0.12	-0.04	-0.09	-0.14	-0.14	0.17*	-0.11	

Notes. The results for the pre-test are shown above the diagonal. The results for the post-test are shown below the diagonal. GPA- Grade Point Average, ECAs - Number of Extracurricular Activities (participation in), HE - Higher Education, No-HE -No Higher Education. Two-tailed. Significat at: *p < 0.05. **p < 0.01. N = 157-165. Cronbach's alpha estimates in parentheses, along the main diagonal.

Table 3
Means, standard deviations, and univariate analysis of variance for study variables.

Between-Subjects Effects	N	Psychological Capital						Emotional Intelligence					
		M	SD	F	df	p	η^2	M	SD	F	df	p	η^2
Pre-test													
Experimental Group	89	4.07	0.45	5.789	1	0.017	0.03	5.46	0.56	4.096	1	0.045	0.03
Control Group	76	3.87	0.63					5.27	0.62				
Post-Test ^a													
Experimental Group	89	4.39	0.54	83.969	2	0.000	0.51	5.38	0.54	105.747	2	0.000	0.57
Control Group	76	4.03	0.76					5.19	0.66				

Notes. *M* average, *SD* standard deviation, *F* *F* ratio, *df* degrees of freedom, *p* significance level, η^2 partial eta squared effect size. All values were computed for the corrected model.

^aThe scores of PsyCap and EI from the pre-test entered as covariates in the analyses for the post-tests.

Table 4
Means, standard deviations, and repeated measures multivariate statistics for study variables.

Within-Subjects Effects	Psychological Capital							Emotional Intelligence					
	N	M	SD	F	df	p	η^2	M	SD	F	df	p	η^2
Experimental Group													
Pre-test	89	4.07	0.45	61.392	1	0.000	0.411	5.46	0.55	3.047	1	0.084	0.033
Post-test		4.39	0.54					5.38	0.54				
Control Group													
Pre-test	76	3.87	0.63	5.908	1	0.017	0.073	5.27	0.61	2.618	1	0.110	0.034
Post-test		4.03	0.76					5.19	0.66				

Notes. *M* average, *SD* standard deviation, *F* *F* ratio, *df* degrees of freedom, *p* significance level, η^2 partial eta squared effect size. All values were computed for the corrected model.

Table 5

Regression analysis for the hypothesized relationship between students' demographics and post-test PsyCap and students' academic performance.

Predictors of GPA	GPA		
	Step 1	Step 2	Step 3
Intercept	19.528***	17.522***	17.521***
Demographics			
Age	-0.227**	-0.214**	-0.214**
Predictors			
PsyCap Post-test		0.160*	0.160*
Intervention			0.001
Overall <i>F</i>	8.825**	6.741**	4.466**
<i>R</i> ²	0.051	0.077	0.077
Adjusted <i>R</i> ²	0.046	0.065	0.060
Change in <i>R</i> ²	0.051	0.025	0.000

Notes. Significant at: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; standardized β coefficients are reported after Z-score transformation, $n = 165$.

the experimental group.

Regarding the change of EI, **hypothesis 3** predicted the scores of EI (a) would increase between the pre-test and the post-test for both the control and the experimental groups; but (b) the baseline pre-test EI scores of the experimental group would be significantly higher than the EI pre-test scores of the control group; (c) a difference expected to remain significant in the post-test. As shown in [Table 4](#), no significant EI change was observed from the pre-test to the post-test in any group, which does not support H3a. However, following the results of [Table 3](#), the experimental group scored significantly higher in EI both in the pre-test ($F(1, 164) = 4.096, p = 0.045, \eta^2 = 0.03$) and the post-test, a difference against the control group that remains significant ($F(2, 163) = 105.747, p = 0.000, \eta^2 = 0.57$). These results support H3b and H3c and indicate that EI scores were higher for the experimental group and remained higher over time.

In looking closer, students in the experimental group scored significantly higher than the students in the control group in two EI dimensions: self-encouragement ($F(1, 164) = 14.567, p < 0.000$) and emotional self-control ($F(1, 164) = 6.570, p < 0.01$). This finding suggests that the students in the experimental group were better prepared (i.e., believed in themselves and in their ability to overcome their limitations and handicaps) and were better able to control their emotions and remain effective than the students in the control group.

Following **hypothesis 4**, the scores of EI were expected to be positively associated to the scores of PsyCap, respectively in the (a) the pre-test, (b) the post-test, and (c) this association would be stronger for the experimental group. The intercorrelations reported in **Table 2** provide initial support to this hypothesis as PsyCap and EI are highly intercorrelated both in the pre-test ($r = 0.42, p < 0.01$) and the post-test ($r = 0.58, p < 0.01$). To further assess this hypothesis, multiple regression analyses were run for pre-test and post-test PsyCap scores, taking EI scores and the educational intervention as predictors. The results are presented in **Table 6**.

As shown, EI pre-test scores positively and significantly predict students' baseline PsyCap ($\beta = 0.435, p < 0.000$, explaining 18.9% of its variance), along with the educational intervention (e.g., PSC I), which explained an additional variance of 1.4%. In the post-test, EI post-test scores predicted overall PsyCap ($\beta = 0.681, p < 0.000$) above and beyond the influence of the educational intervention ($\beta = 0.215, p < 0.01$), explaining further 20.1% of the post-test PsyCap score. Thus, the results support H4 confirming that in the HE context EI is a significant antecedent of students' overall PsyCap.

Finally, **hypothesis 5** predicted a positive association between EI pre-test and post-test scores and students' GPA, an association expected to be stronger in the experimental group. To test this hypothesis, multiple regression analyses were run for GPA taking EI pre-test and post-test scores and the educational intervention as predictors. The results are presented in **Table 7**.

Contrary to predictions, only EI pre-test scores predicted students' academic performance, and the association was negative in the two groups. As shown, the EI pre-test score explained 10.2% of the variance of GPA despite the educational intervention. Although not predicted, subsequent regression analyses were run to determine which dimension of EI in the pre-test could account for this negative unexpected effect. The results indicate that only two EI dimensions were negatively associated to students' academic performance: understanding one's own emotions ($\beta = -0.250, p < 0.000$) and empathy ($\beta = -0.255, p < 0.01$). On the contrary, self-encouragement was positively associated to academic performance ($\beta = 0.307, p < 0.000$). Overall, these findings suggest that not all dimensions of EI contribute to increasing students' academic performance, at least among the sampled students.

5. Discussion

The current study extends earlier research by examining the effectiveness of an educational intervention built upon the ELT and the lens of the positive psychology to increase management students' PsyCap and EI during HE. This study also analysed the antecedents of students' overall PsyCap and academic performance. To achieve these goals, a field experiment and a quasi-experimental design with a pre-test, post-test, and a control group was used that involved a total of 165 college students.

The results confirm that the designed educational intervention was effective in increasing PsyCap. For the control group, the changes in PsyCap over time were also positive and significant, but to a lesser extent than occurred in the experimental group. This finding confirms that HE develops students' non-cognitive skills (Thompson et al., 2020) including academic PsyCap as an omnibus concept (Lupşa et al., 2020; Luthans et al., 2014). Although previous research has not consistently assessed how to develop EI and PsyCap simultaneously through experiential learning, this is advanced in this study. The findings extend to the educational context the discussion of the antecedents of PsyCap at work (e.g., Mellão & Mónico, 2013; Wu & Nguyen, 2019) by demonstrating that EI is a significant antecedent of academic PsyCap.

As for developing EI, the results confirm that the first course (PSC I) was moderately effective and thus supporting previous results (Gilar-Corbi, Pozo-Rico, Sanchez, & Castejon, 2018; Mattingly & Kraiger, 2019). Higher EI pre-test scores were found in the experimental group, especially for the dimensions of self-encouragement and emotional self-control, both key requirements for managerial jobs (Goleman, 1996; Goleman et al., 2013). However, one thing is to score high in overall EI, and entirely another to score high in some dimensions and low in others. As shown, Management students scored higher in overall EI and scored even higher in emotional self-control and self-encouragement, which suggest that EI can be taught, and these two dimensions are probably even more malleable to change. Furthermore, as Management students scored significantly higher in self-encouragement in the post-test, this suggests a positive and lasting effect of training for this EI dimension. Another related finding that is worthy of further discussion refers to the slight yet non-significant decrease of EI post-test scores in both groups. Although the results showed that the Management students were better equipped emotionally than Economics students and this difference persisted over time, one cannot fully explain this slight EI decline. This deterioration in EI after the fourth semester might be related to the increased competition and stress to perform and/or

Table 6

Multiple regressions for pre-test and post-test overall PsyCap, taking EI scores and intervention as predictors.

Predictors of PsyCap	PsyCap Pre-Test		PsyCap Post-Test		
	Step 1	Step 2	Step 1	Step 2	Step 3
Intercept	1.803***	1.825***	1.829***	1.878***	0.976***
EI Pre-Test	0.435***	0.416***	0.391***	0.358***	-0.150
Intervention		0.120+		0.215**	0.185**
EI Post-Test					0.681***
Overall F	37.948***	20.620***	29.479***	20.032***	35.732***
R2	0.189	0.203	0.153	0.198	0.400
Adjusted R2	0.184	0.193	0.148	0.188	0.389
Change in R2	0.189	0.014	0.153	0.045	0.201

Notes. Significant at: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; standardized β coefficients are reported after Z-score transformation, $n = 165$.

Table 7

Regression analysis for the hypothesized relationship between students' age and EI scores and students' academic performance.

Predictors of GPA	GPA			
	Step 1	Step 2	Step 3	Step 4
Intercept	19.528***	23.639***	23.283***	23.122***
<i>Demographics</i>				
Age	-0.227**	-0.238**	-0.237**	-0.227**
<i>Predictors</i>				
EI Pre-test		-0.249***	-0.322**	-0.328**
EI Post-test			0.097	0.090
Intervention				0.080
<i>Overall F</i>	8.825**	10.324***	7.122***	5.622***
<i>R2</i>	0.051	0.113	0.117	0.123
<i>Adjusted R2</i>	0.046	0.102	0.101	0.101
<i>Change in R2</i>	0.051	0.062	0.004	0.006

Notes. Significant at: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; standardized β coefficients are reported after Z-score transformation, $n = 165$.

may just reflect a "ceiling effect". Once students develop an ample understanding and control of their own and others' emotions, including self-encouragement, then additional training may not provide much in further raising such an already high level of EI. Altogether, the findings suggest that interventions aimed at increasing students' EI during Management education need to be further studied as there seems to be potential in distinguishing the impact of training on overall EI and in its separate dimensions, including an analysis of how long the changes persist.

Finally, results indicate that psychological factors, such as PsyCap and EI, are important predictors of academic performance although in somewhat unexpected ways. Indeed, support is provided to previous studies showing that overall PsyCap is a positive predictor of academic performance (Luthans, Avolio, et al., 2007; Lupşa et al., 2020). However, the more striking finding of the present study is the negative association between EI and GPA both in the experimental and control groups. In this study, as the levels of EI increased, the relationship with overall GPA decreased, which is contrary to the meta-analytic evidence reported by Perera and DiGiacomo (2013). However, a similar finding was recently reported by Schlegel and Mortillaro (2019), who found a negative relationship between emotion regulation and students' grades. The present study extends this analysis by revealing which EI dimensions can deter or promote students' GPA. As shown, empathy and students' understanding of their own emotions were negative predictors of GPA and self-encouragement was a positive predictor. An explanation for the former effects may relate to students redirecting their efforts from academic tasks to understanding themselves and others; this might decrease their academic performance while when students are high in self-encouragement, it provides them greater support and reassurance as to what is expected from them in the exams.

Given that these findings cannot be extrapolated to other samples, more research is required before educators can concentrate on developing specific EI competencies, such as self-encouragement, rather than more general EI. Despite the absence of a positive relationship between overall EI and academic performance, EI represents a valuable psychological resource to foster students' academic PsyCap. As labour market outcomes are known to be higher among individuals with high behavioural competencies (Brunello & Schlotter, 2011; Bonesso et al., 2020), knowing which skills-set is worthy of further development and how to do it is a key input of this study for future research.

In sum, the contributions of this study are fourfold. Firstly, the results confirm the potential of developing students' overall PsyCap (Luthans et al., 2014) and EI (Mattingly & Kraiger, 2019) during HE. Indeed, the results show that PsyCap and EI mature over time and are teachable. The educational intervention studied (i.e., PSC I and PSC II) is effective in attaining a lasting effect on students' self-encouragement, emotional self-control, and overall PsyCap.

Secondly, the results of the present study extend the discussion of the antecedents of PsyCap to the educational context by showing that EI is an antecedent of academic PsyCap. This interplay between EI and PsyCap has been overlooked and has potential for additional investigation by examining how the specific dimensions of EI entangle with the dimensions of PsyCap and how they mature and develop through specific training.

Thirdly, this study advances our understanding of how to design curricular programs aimed at developing Management students' psychological resources, such as PsyCap and EI. The main reason these non-cognitive skills are important relies on their increasing prominence in the labour market (Blázquez et al., 2018; Succi & Canovi, 2019) and an interest among responsible management educators (Brook & Pedler, 2020; Parkes et al., 2017). This research shows that by drawing on the lens of positive-psychology and the experiential learning theory, HEIs can equip graduates (and citizens) with the psychological resources that are essential for a healthy and rewarding life.

Finally, and relatedly, the findings from this study question the undisputed view that psychological resources are only important because they are a pre-requisite of performance. This study advances this debate by evidencing the impact of EI on other psychological resources, such as overall PsyCap, which, in turn, impacts academic performance. To support the sustainable development of organizations, scholars and HEIs may play a pivotal role in identifying and developing the personal and social competencies that influence the development of human capital, thus leading people to more enriching life experiences. Hence, the development of people's competencies to cope with complex and difficult situations in educational and work settings should be undisputable despite its weak or

small influence on performance outcomes, such as GPA or job performance.

5.1. Limitations and implications for future research

In interpreting the results of this study, a few limitations should be noted. Firstly, the control group (i.e., second-year students of the Bachelor's in Economics) was not a true control group because the participants were not randomly assigned to the experimental versus the control condition. Although Economics' students were not subject to the educational intervention, they improved their PsyCap, although to a lesser extent than the students of the experimental group. Despite the control of the baseline socio-demographic differences between both groups, it becomes clear from the findings that the overall PsyCap matures over time and might be developed by other students' engagements. These findings are informative to HE scholars and practitioners and warn for the need to first evaluate the PsyCap and EI levels of students at the beginning of each intervention to determine their learning readiness. Given that PsyCap can boost academic performance and is required in management and leading roles, more research addressing its development after informal and formal college activities is then required.

Secondly, the attrition of respondents verified between the pre-test and the post-test, although common in similar designs, resulted in a small final sample size. Given that no significant differences were found between the participants who completed the post-test survey and those lost to attrition, no major biases are then expected.

Another methodological limitation refers to the period of data collection. The pre-test was run in February after the completion of the first course-unit of PSC I and the end of the third semester. This timing was pondered and deemed to be more appropriate to ensure all students were already well settled and adjusted to the HE context. However, this affected the baseline scores of the two groups that might have been higher than if they had been measured upon students' college admission. The post-test was then run at the end of the fourth semester, after the completion of PSC II and 14 weeks after the pre-test. This timing and duration are equivalent to similar studies (Lupşa et al., 2020) and are appropriate for testing the deferred effect of PSC I and the immediate effectiveness of PSC II, but they might have decreased the size of the effects. For instance, Lupşa et al. (2020) found that interventions aimed at increasing resilience that stretch below one month were the most effective. Therefore, future research may survey students upon arrival and subsequently after each semester to determine how PsyCap and EI evolve over time.

Fourthly, all dependent measures were self-reported, which might have been subject to the social desirability bias and practice-effect (Ellis, 1999). The social desirability bias could have influenced the self-report of academic performance, and the practice-effect could have strengthened the change in PsyCap and EI from the pre-test to the post-test. Given that these biases probably occurred in both groups, no major contamination was then expected. Besides, they can hardly explain the observed differences between groups. Furthermore, Honicke and Broadbent (2016) found no significant differences in the relationship between self-efficacy and academic performance, as this was measured by self-report or official grades and thus deem the design choice adequate.

Finally, a relevant limitation refers to the extent the findings apply to graduates' transition to the labour market. The findings are informative regarding the role played by HE in general and particularly in Management education to develop sampled students' PsyCap and EI. However, this study cannot predict how graduates will apply the newly developed psychological competencies in future careers (Botke et al., 2018). Although it is likely that once these competencies are acquired, they will remain relevant, so future research needs to investigate the longer-term effects of psychological resources' training. The observed effectiveness of PsyCap intervention might extend to the transition to postgraduate studies and/or to the labour market, for which longitudinal methods should be used. From the perspective of academic Management education, the study findings show that PsyCap and EI can be developed to enhance students' academic performance and future employability (Pinto & Ramalheira, 2017), but these resources certainly value for their own sake to ensure individual and societal flourishing. This study, therefore, contributes to the evidence regarding PsyCap and EI development through the Business and Management curriculum, and is promising given the need to quicken the development of these competencies early in adulthood life (Gilar-Corbi, Pozo-Rico, Sanchez, & Castejon, 2018). Furthermore, this study highlights some of the key benefits of HE, which is particularly important in the European educational context after the Bologna process (Brunello & Schlotter, 2011) because HEIs have been urged to demonstrate graduates' competencies to stay relevant.

5.2. Implications for practice

These findings also have several practical and managerial implications for students, HEIs and accreditation bodies, and employers. For students, the findings suggest their enrolment in compulsory or facultative educational interventions aimed at increasing their PsyCap and EI is a worthwhile investment. As shown, overall PsyCap develops during HE and is teachable through specific educational interventions. Moreover, PsyCap is a positive antecedent of academic performance. However, students must continually develop their PsyCap to build a long-lasting effect for overcoming the barriers to academic and career success. As for overall EI, it is a psychological resource less malleable to change, except for individuals' self-encouragement and emotional self-control. During HE, students face new challenges that may deter their self-belief in themselves and in their ability to overcome difficulties. Higher education also challenges their emotional self-control as students often feel discouraged and less capable of managing their emotions and staying effective. Although these negative effects are unfortunately common and might deter students' academic performance, the good news is that these dimensions of EI are teachable.

The findings of this study also have implications for HEIs in that they support the efforts to implement evidence-based interventions to increase students' PsyCap variables and, subsequently, students' academic performance. This intervention can be built into the course curriculum provided by business schools and Management faculties because PsyCap change has important individual and organizational outcomes. The present study also provides an additional understanding of how students' EI evolves during HE and

reveals that a competitive academic life can affect students' self-encouragement and emotional self-control that can be offset by specific educational intervention. Furthermore, the study contributes to the scarce evidence regarding the importance of HE to the development of non-cognitive skills (Brunello & Schlotter, 2011), such as EI and PsyCap. Although more research is needed to tailor new activities and design specific interventions, this study is generally informative on how HEIs can develop positive psychological capacities in the classroom through the ELT. As shown, the four-learning stages can guide the design of other educational courses provided by universities or certified organizations and directed to the development of students' personal and social competencies.

Another implication for HEIs stems from the lack of differences based on students' demographics. Given that PsyCap and EI were not predicted by individual characteristics, HEIs and employers can rule out being concerned about selecting for age or gender or family background to enhance students' psychological resources.

The findings of this research also have implications for employers in general and educators in particular by informing them how to engage in responsible management education by offering the formal training required to develop paramount non-cognitive skills. The findings also encourage employers' training initiatives to develop EI and PsyCap in the workplace given the malleability in early adulthood and impact on performance. These efforts can be well-suited on the condition these training programs adopt a positive-psychology view and follow an experiential learning approach.

6. Conclusion

In Europe, the Bologna Process prompted HEIs to increase their focus on the acquisition of employability skills (Cinque, 2016; Succu & Canovi, 2019). A common approach adopted by HEIs was the incorporation into the curriculum of course-units aiming at enhancing students' non-cognitive skills and psychological resources, such as PsyCap and EI. An underlying assumption is that these individual resources are correlated to students' academic performance and future employability. Many debate the extent to which non-cognitive skills can be taught effectively in the classroom. This study then examined the effectiveness of an educational intervention aimed at developing Management students' PsyCap and EI drawing on an experiential learning model and a positive-psychology view. Furthermore, this research investigated the development of these competencies over time and their impact on students' academic performance. The findings support this approach and confirm that PsyCap and EI develop during higher education and through formal training. Moreover, the present study provides new insights into the links between EI and PsyCap and students' academic performance, and thus advances new research avenues by disentangling these links.

In response to the increasing pressures from employers and other institutional groups (e.g., ONU, EU, OECD) to raise graduates' employability and commit to the ongoing development of responsible management education, HEIs can do more than just increase students' chances of academic accomplishment and possible career success, which are small wins given the challenges ahead. In mid-2017, Maria Humphries-Kil wrote: "experience tells us that arousing emotions and care-full reflection on those emotions are as necessary to management education as the presentation of facts and figures, and the teaching of rational strategies bereft of emotional and often ethical consideration, for the responsible management of people and planet" (Humphries, 2017, p. 387). This study strongly endorses this call and offers a sound rationale for developing emotional education in management.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ijme.2021.100516>.

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