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Sport management education through an entrepreneurial perspective: Analysing its impact on Spanish sports science students

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ABSTRACT

Entrepreneurship education is becoming increasingly important because it can improve the employability of students. However, although it has been introduced in universities in recent years, its integration into sports education is still scarce. Therefore, the aim of this study is to present a way of approaching a sports management subject from an entrepreneurial perspective and to evaluate the effects of that approach on students. For this purpose, a sample of 54 sports science students from a Spanish university has been analysed. A longitudinal design has been carried out using Ajzen's theory of planned behaviour (1991), intrapreneurial intentions, the entrepreneurial climate and the entrepreneurial skills as the bases for analysing the effects of this approach on students. The results show that students who receive this training significantly improve their perception of perceived behavioural control and the university's climate towards entrepreneurship. This paper also highlights that the approach affects students differently depending on their existing characteristics. Finally, a series of practical implications for sport education managers are presented.

1. Introduction

The economic and financial crisis of 2008 has resulted in a new era with important consequences for entrepreneurship and enterprise education (Rae, 2010). This new era is due to the international consensus on the fundamental role of entrepreneurship in economic development, job creation and innovation (Raposo, Rodrigues, Dinis, do Paço, & Ferreira, 2014). For this reason, in the coming decades, universities are expected to promote entrepreneurship as part of their third mission to support innovation and the creation of new companies (Fini, Grimaldi, Santoni, & Sobrero, 2011).

In recent years, the European Union has highlighted the need to train young people in entrepreneurship and has advised member countries to incorporate entrepreneurship in the context of education (Cárdenas & Montoro, 2017). However, in Spain, the efforts to develop specific entrepreneurial skills and foster favourable attitudes towards entrepreneurship through the academic curriculum itself are still insufficient and unsatisfactory (Lanero, Vázquez, Gutiérrez, & García, 2011; Sieger, Fueglistaller, & Zellweger, 2016). In fact, students have highlighted the need for improved curricular and extracurricular activities for the development of entrepreneurship (Vázquez, Georgiev, Gutiérrez, Lanero, & García, 2010).

Moreover, although demand has driven the rapid growth of entrepreneurship education, there are still undetermined aspects of

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what to teach, how to teach it and how to effectively measure entrepreneurial learning (Morris & Liguori, 2016). The theory of planned behaviour (TPB) of Ajzen (1991) is one of the recommended theories used by different researchers to measure the effect of entrepreneurship education (Fayolle, Gailly, & Lassas-Clerc, 2006). Nevertheless, there is minimal empirical data on the teaching beliefs, actual practices and outcomes for students beyond entrepreneurial intentions (Fayolle, Verzat, & Wapshott, 2016; Kamovich & Foss, 2017).

From one perspective, the concept of the entrepreneurial climate is gaining attention in the academic literature, as it has been shown to influence intentions and actions towards entrepreneurship (e.g., Morris, Shirokova, & Tsukanova, 2017; Sieger et al., 2016). For this reason, Bergmann, Geissler, Hunt and Grave (2018) encourage universities to include the entrepreneurial climate as an indicator in their strategic decision-making process and to regularly monitor and analyse this important variable.

However, although entrepreneurship education has expanded rapidly in higher education (Jones, 2010) in both business and non-business disciplines (Henry & Lewis, 2018), in sports education, to date, there has been little research linking the field of entrepreneurship education and methods of teaching that use a more entrepreneurial approach (Jones & Jones, 2014; Ratten, 2018; Ratten & Jones, 2018). This means that there is a gap in the current sports education curricula that can be filled by entrepreneurship studies (Ratten & Jones, 2018). This fact is especially relevant because entrepreneurship is of vital importance in the sports industry (Ball, 2005; Ratten, 2011) due to its competitive nature and the growth it has experienced in recent decades, so, sports managers must be enterprising to stay ahead of their competitors (Ratten & Ratten, 2011). In fact, increasingly, more graduates with entrepreneurial skills are now in demand due to the characteristics of this sector and the current economic market (González-Serrano, Crespo, Pérez-Campos, & Calabuig, 2017; Jones & Jones, 2014).

So, the present research seeks to contribute to the literature existing on entrepreneurship education in the following ways. Firstly, proposing a new practical application to develop entrepreneurship within sport education in high levels (university), specifically through a management subject of the last year of the sport science degree. Secondly, by analysing the results of this practical application, analysing the changes not only in the entrepreneurial variables if not also in the intrapreneurial intentions, if not also in the TPB antecedents and new variables (entrepreneurship university climate, entrepreneurial skills and intrapreneurial intentions). Moreover, using another sort of methodology such as QCA (Qualitative Comparative Analysis) to better understand what conditions generate entrepreneurship education to have a greater positive impact on students. Finally, unlike some research about sport entrepreneurship education has been done, in Spain, to the best of our knowledge, there is no longitudinal empirical research on entrepreneurship education with sports science students. So it will contribute with the scarce literature about sport management entrepreneurship in general, and specially in a specific context, Spain.

2. Entrepreneurship education

At the university level, entrepreneurship education (EE) can be used to equip students with entrepreneurial skills and abilities that prepare them for entrepreneurial careers (Chen et al., 2015) and thereby improve their employability. Entrepreneurship education is defined as “any pedagogical program or process of education for entrepreneurial attitudes and skills” (Fayolle et al., 2006, p. 702). Thus, it plays a fundamental role in the development of entrepreneurs (Martin, McNally, & Kay, 2013) and is considered one of the key instruments for increasing the entrepreneurial attitudes of both potential and emerging entrepreneurs (Liñán, Rodríguez-Cohard, & Rueda-Cantuche, 2011). By contrast, entrepreneurial learning is defined as “learning to recognise and act on opportunities, and interacting socially to initiate, organise and manage ventures” (Rae, 2005, p. 324).

The European Commission has already taken some measures. In its Entrepreneurship Action Plan 2020, it states that education must be linked to reality through the use of practical learning models based on experience and through the knowledge and experience of current entrepreneurs. Along the same lines, according to Teijeiro, Rungo, and Freire (2013), education systems must promote skills that enable students to improve their employability. Therefore, the project for the creation of a common European University highlights a change in educational methodologies by emphasizing the value of active methodologies (Michavila, 2009) and the importance of developing behavioural competencies to prepare entrepreneurs to be successful (Correa, Delgado, & Conde, 2011).

Hence, questions have been raised regarding the social value of entrepreneurship education and what the focus of this form of education should be (Jones, 2010), and some studies note there is little evidence to show that EE helps to create entrepreneurs (Martin et al., 2013). For this reason, according to Pittaway and Cope (2007), EE should be promoted through research on the relationship between educational processes and the results of these processes. In particular, it is necessary to pay more attention today to non-business-related disciplines since studies in these areas are scarce (Turner & Gianiodis, 2018), with the case of sports education being a clear example.

2.1. Entrepreneurship education in sport

The role of education is an important part of sport management, but it has often been neglected in terms of its importance for the competitiveness of the sports industry (Ratten, 2018). It is important to stress that a curriculum is not useful unless it meets the needs of society. It is therefore essential to have an up-to-date curriculum that reflects current changes and paradigms (Patesan & Bumbuc, 2010), and universities have a responsibility to adjust their educational offerings to meet the challenges of today's world. According to several authors (Ratten, 2018; Ratten & Jones, 2018), the case of university students in the sports sector can be addressed through entrepreneurship education and the promotion of entrepreneurial competencies in the curriculum. Sport sciences are unique in relation to their economic and social function and the characteristics they help people develop, considering that most sport sciences students have entrepreneurial competences that can be transformed into entrepreneurial actions throughout education (Naia,

Baptista, Biscaia, Januário, & Trigo, 2017).

Traditionally, sports educators have focused on developing content related to physical development (Ratten & Jones, 2018), but due to the growing interest in sports-related businesses, a change in sports education is needed to include a greater emphasis on entrepreneurship education (Ratten, 2018). This fact is tangible in Europe, where the sports sector is a growing industry that employed 1,694,100 people in 2016 and grew by 2.60% between 2011 and 2016 (Eurostat, 2018a). Furthermore, in the specific case of Spain, the sports sector is growing and accounts for more than 1% of total employment, with approximately 50% of the employees in this sector being in tertiary education. Therefore, these characteristics, together with the high rates of youth unemployment (35% in March 2018, Eurostat, 2018b) that Spain presents (the second highest youth unemployment rate in the European Union), make entrepreneurship a viable option for the future sports-related graduates. Despite this, so far, there has been little recognition of entrepreneurship in the sports education literature in general (Ratten, 2018) and especially in Spain.

However, in recent years, the interest in entrepreneurial education in sports has been growing among educators because it is believed that it can improve the employability of these students (Ratten & Jones, 2018). In fact, new sources of employment linked to physical activity and sports are currently increasingly favouring self-employment as the main employment opportunity for graduates in this sector both in Spain (Pérez, Vilanova, & Grimaldi-Puyana, 2016) and in other countries (Jones, Jones, Williams-Burnett, & Ratten, 2017). In addition, these companies are typically small in size (MECD, 2018) and are owned by trainers/instructors who act as freelance contractors or personal trainers (Jones et al., 2017), where entrepreneurial orientation is especially important for the business's performance (Núñez-Pomar, Prado-Gascó, Añó, Crespo, & Calabuig, 2016).

Ratten and Jones (2018) note that the objective of entrepreneurship education in sport is to develop personal attributes that effectively prepare students for the labour market or for self-employment. Along the same lines, Ball (2005) pointed out that an entrepreneurial approach is necessary in the sports sector both in the development of new companies (entrepreneurship) and in existing ones (intrapreneurship). Therefore, in the sports sector, there is a need both for entrepreneurship education in order to encourage the creation of new companies in this sector and for enterprise education in order to favour the efficient management of these companies through competent managers and employees. For the methodologies that should be used for this, Jones and Jones (2014) highlighted the important role of learning about entrepreneurial stories, and recommended the analysis of real entrepreneurs and the mentoring of active entrepreneurs. Similarly, Ratten (2018) and Ratten and Jones (2018) noted that entrepreneurial education should be made to fit the sports context by focusing on real-life examples and experiential learning. Therefore, a problem-based learning methodology may be a good choice for improving the employability of sports science students (Duncan & Al-Nakeeb, 2006; Duncan, Lyons, & Al-Nakeeb, 2007). These results are in line with Nabi, Liñán, Fayolle, Krueger, and Walmsley (2017), who highlight that experiential pedagogies have higher impact on students because they focus on developing behavioural competence in problem-solving in real-life entrepreneurial situations.

Particularly, in the case of sport management education, it is a challenge for sport managements professors to find the best way to foster student learning (Shouthall, Nagel, LeGrande & Han, 2003). According to several authors (De Schepper & Sotiriadou, 2018; Raven, 2018) there is a “gap” between sport management education and the needs of sports company managers over graduates in the sports sector. Recently, Miragaia and Soares (2017), highlighted that sport management education should be developed to foster self-employability across new pedagogical approaches that allow the enhancement of critical thinking. In the same vein, in a study conducted by Dinning (2017) about the skills, attributes and capabilities required for sports graduate students by employers, he found that enterprise/entrepreneurship skills are highly demanded. This author recommends the use of case studies and challenges to develop them.

Thus, in the field of sports management there is an urgent need to introduce new teaching and learning strategies to improve the entrepreneurial skills of students during their studies (Nová, 2015). In sport management education, introducing sport sciences students to industry experiences that offer a more realistic image of professional practice enables an increasement of their employability (De Schepper & Sotiriadou, 2018). Therefore, this “gap” in sport management education could be fulfilled with ESME, for Nová (2013) highlights that it is very common to use case studies in sport management to foster entrepreneurship, and seems to be a proper methodology.

However, universities have been slower to integrate entrepreneurship education into their sports management curriculum because they typically focus on other thematic areas (Ratten, 2018). In the specific case of Spain, there is only one general degree of four years, where sport science students are taught to be professionals in the sport sector, physical recreation and health sector. Its competences are oriented towards the training of those students who want to work in sports services companies, in outdoor physical activities, in school sports, in sports training as well as physical preparation, in physical maintenance and health programmes, in people with disabilities, or within motor rehabilitation teams for people with injuries, as well as in the field of sports management. So, although there are no specific subjects on sports entrepreneurship in the current degree curriculum, there are sports management subjects that can and should be approached today from an entrepreneurial perspective.

Such an approach is necessary because improving the educational process of future sports professionals is essential, especially in terms of their future employment in the global economy (Boni & Calabuig, 2017). Therefore, a practical application has been proposed to provide an entrepreneurial approach to one management subject (strategic sports management) of a sports science degree at a Spanish university (see Appendix 1) and to generate entrepreneurship sport management education (ESME). The following section will provide the theoretical basis for the evaluation of entrepreneurship education programmes since the evaluation of entrepreneurship education programmes corresponds to both economic and academic challenges (Fayolle et al., 2006).

2.2. The impact of entrepreneurship education: the theory of planned behaviour (TPB) as an assessment framework

It should be noted that one of the most common ways of studying the attitudes towards entrepreneurship has been entrepreneurial intentions. These intentions are determined by attitudes, which are influenced by exogenous factors such as skills, competencies and situational variables (Krueger, 2003). Ajzen (1991) points out that through a wide range of different behaviours, behavioural intentions have been considered to be the most immediate predictors of real behaviours.

In the theory of planned behaviour of Ajzen (1991), intentions have three independent determinants or antecedents: (1) attitude towards behaviour (ATB), (2) perceived behavioural control (PBC) and (3) subjective norms (SN). According to Ajzen (1991), the ATB is the degree of attractiveness that one person presents regarding the decision to be an entrepreneur. The PBC is the perceived degree of difficulty of becoming an entrepreneur, and the SN is the perceived social pressures from a close environment in relation with the decision to be an entrepreneur. According to Fayolle and Gailly (2015), TPB should move from its first objective as a behavioural predictor to being used as an indicator of the impact of entrepreneurship courses.

To assess the impact of the entrepreneurship education in sports science students, in line with previous studies (Fayolle et al., 2006; Fayolle & Gailly, 2015), we will use the TPB of Ajzen (1991). In addition, some entrepreneurial skills that have been proved to impact entrepreneurial intentions in previous studies (González-Serrano et al., 2017; Liñán, 2008) and the entrepreneurial university climate (as Bergmann, Geissler, Hundt, and Grave (2018) highlighted) have been taken into account. In terms of the evaluation, this means that measuring the impact of EE on attitudes and intentions provides an indirect way to assess its impacts in terms of entrepreneurial behaviours. Thus, according to Fayolle et al. (2006), this proposed approach focuses on the impact of EE in terms of the evolution of students' attitudes and mentality and not only on the number of enterprises that are created.

As for the effect of entrepreneurship courses on students, the GUESSS report by Sieger et al. (2016) suggests there is a close relationship between receiving an EE and university students' entrepreneurial intentions. However, the direct and strong relationship between the impacts of entrepreneurship education on entrepreneurship and human capital has not yet been strongly demonstrated due to the presence of contradictory results (Ahmed, Chandran, & Klobas, 2017; Fayolle & Gailly, 2015). In fact, in the meta-analyses conducted by Bae, Qian, Miao, and Fiet (2014) and Martin et al. (2013) on the influence of EE on entrepreneurial intentions, they found that entrepreneurship education has a statistically significant but small positive relationship with entrepreneurial intentions. Therefore, on the basis of these previous studies, the following hypothesis is proposed:

H1. The entrepreneurial intentions of sports science students will improve in a statistically significant way after receiving ESME.

However, the meta-analysis of Bae et al. (2014) only focused on analysing the influence of entrepreneurship education on entrepreneurship intentions. Some studies, such as Falloye and Gailly (2015), analysed the antecedents of entrepreneurial intentions and found that the PBC and the ATB of students were affected in the medium term. In addition, along the same line, Falck, Heblich, and Luedemann (2012) pointed out that during entrepreneurship courses, students can contact successful entrepreneurs who participate in those courses, which can affect their PBC. Therefore, following hypotheses are made.

H2. The perceived behavioural control of sports science students will significantly improve after receiving ESME.

H3. The attitude towards the behaviour of a sports science students will significantly improve after finishing ESME.

Attitudes and entrepreneurial skills can be developed and refined when students participate in entrepreneurship education programmes (Harris & Gibson, 2008). Similarly, Jones, Pickernell, Fisher, and Netana (2017) show that EE helps to facilitate the creation of companies and to support alternative professional careers through the knowledge and entrepreneurial skills that graduates receive. Auken (2013) found that studying entrepreneurship programmes abroad improved the entrepreneurial skills of Spanish students. Moreover, previous studies have revealed that pragmatic EE plays a pivotal part in enhancing entrepreneurial qualities and skills (Lee, Chang, & Lim, 2005). Therefore, according to these studies, we state the following hypotheses.

H4. The entrepreneurial skills of students in the sports sector will improve in a statistically significant way after completing ESME.

H5. The intrapreneurial intentions of students in the sports sector will improve in a statistically significantly way after completing ESME.

The entrepreneurial spirit of the educational environment and its common values, norms, management, governance, infrastructure and particular offerings related to entrepreneurship may affect students' entrepreneurial intentions and actions (Morris et al., 2017; Sieger et al., 2016). Therefore, the concept of the entrepreneurial climate has gained attention in the academic literature and public debate, and increasingly more universities are taking steps to improve their entrepreneurial climate (Bergmann et al., 2018). Thus, the following hypothesis is presented:

H6. After receiving ESME, sports science students will significantly and positively improve the perception of the university climate towards entrepreneurship.

3. Materials and methods

3.1. Sample

The sample was composed by 54 Sport Science degree students in the last course of the degree (4th) from one Spanish University.

Table 1
Description of the scales of the questionnaire.

Scales		Items	Sources
Scale of entrepreneurial intentions (EI)		15–20	This scale has been extracted form EIQ by Liñán and Chen (2009)
Scale of attitudes toward the behaviour (ATB)		28–32	
Scale of subjective norm (SN)		33–35	
Scale of perceived behavioural control (PBC)		9–14	
Scale of intrapreneurial intentions (II)	Innovation	21–24	It is an adaptation of the intrapreneurial behaviour scale of Stull and Singh (2005). It has
	Risk-taken	25–27	been adapted by González-Serrano, Crespo and Calabuig, 2017, showing good fit index
Scale of entrepreneurial skills (ES)		3–8	Scale extracted from Liñán (2008)
Scale of university climate towards entrepreneurship (UC)		36–38	Scale extracted from Luthje and Franke (2004). Only the three items that were used in the GUESSS project of Sieger et al. (2016)

These students were taking the optional subject of strategic sports management, which is one of the sports management subjects of this degree. With respect to gender, 15.40% were female students and 84.60% were male students, with an age range between 20 and 37 years, and an average age of 22.19 years (SD = 2.79). For their respective sports practice, 32.60% practised or played individual sports, and 67.40% practised or played team sports at the competitive level.

3.2. Instrument

As a measuring instrument, a self-administered questionnaire has been used. It is composed using the following scales.

To measure these scales, a seven-point Likert scale was used, with 1 representing a strong disagreement or very low capacity and 7 representing a strong agreement or very high capacity (see Table 1). Moreover, the following demographic data were measured: gender, age and sport practice. See full questionnaire in Appendix 2.

3.3. Procedure

A longitudinal study with a pre-test and post-test was adopted to measure the changes in students' perceptions over a period of approximately eight weeks. The voluntary nature and anonymity of the data were guaranteed during the process. The students completed the questionnaire in their classrooms at the beginning of their classes. To identify the pre-test and post-test results of each subject, students were asked to enter their first two letters of their first and last names. The data collection was carried out in two phases (the September pre-test and the December post-test) during the 2017–2018 academic year.

3.4. Statistical analysis

Descriptive analyses of the means, percentages, and correlation analyses were performed. For the reliability of the scales, the Cronbach's alpha was calculated, and the value that Peterson (1994) recommended (minimum value of 0.70) was taken into consideration. Then, a Kolmogorov-Smirnov test was performed to verify the normality of the data, and it showed that the data were non-parametric ($p < .05$). Thus, to verify the intra-group differences between the pre-test and post-test data collection, a Wilcoxon test was performed.

Since the data were non-normal (Meissel, 2010), as the American Psychological Association (2001) states, it is almost always necessary to include some index of the effect size or strength of the relationship. The effect sizes of the comparisons were estimated using Cliff's delta. The SPSS 23 software program and the Cliff's Delta Calculator were used to process the data.

Subsequently, the fsQCA was carried out. A descriptive analysis was first performed, and the calibration values were calculated. The categorical variables were codified into a dummy variable (sex: 0 = female, 1 = male; sport practice: 0 = competitive team sport practice; 1 = competitive individual sport practice; and age: 0 = younger, 1 = older). With continuous variables, the literature suggests that the three thresholds must be the 10th, 50th and 90th percentiles (Woodside, 2013). Then, two separate analyses were then performed using fsQCA to examine the logically possible combinations of the conditions (Eng & Woodside, 2012). This analysis allows for an in-depth exploration of how causal conditions lead to a result (equifinity). Using this methodology, the influence of a particular attribute on a specific result depends on how that attribute is combined with other attributes rather than on the level of that individual attribute.

4. Results

4.1. Descriptive statistical analysis and intra-group differences

As seen in Table 2, both in the pre-test and in the post-test, all scales have adequate levels of reliability, ranging from 0.75 to 0.97. In relation to the correlations of the variables with entrepreneurial and intrapreneurial intentions, all of them presented statistically significant correlations in both the pre-test and post-test measures, with the exception of the subjective norm variable. The variable with the highest correlation was the attitudes toward the behaviour ($r = 0.79$; $p < .001$) for EE and entrepreneurial skills ($r = 0.52$;

Table 2
Descriptive analysis of entrepreneurial variables, Cronbach's alpha and the correlations with entrepreneurial and intrapreneurial variables.

(n = 54)	Number of items	M (SD)	Cronbach's alpha	1	2
Initial level (before ESME)					
1. Entrepreneurial intentions	6	3.46 (1.59)	.95	-	.29*
2. Intrapreneurial intentions	7	5.11 (1.11)	.90	.29*	–
3. Perceived behavioural control	6	3.38 (1.26)	.92	.68***	.43***
4. Attitudes towards behaviour	5	4.50 (1.40)	.92	.79***	.34**
5. Subjective norms	3	5.79 (1.27)	.85	.06	.19
6. Entrepreneurial skills	6	4.76 (0.85)	.75	.42***	.52***
7. University climate	3	4.12 (1.37)	.92	.13*	.20*
Level immediately after ESME					
1. Entrepreneurial intentions	6	3.61 (1.67)	.97		.49***
2. Intrapreneurial intentions	7	5.20 (1.07)	.93	.49***	–
3. Perceived behavioural control	6	3.98 (1.91)	.93	.62***	.43***
4. Attitudes towards behaviour	5	4.51 (1.45)	.95	.87***	.61***
5. Subjective norms	3	5.60 (1.26)	.86	–	
6. Entrepreneurial skills	6	4.94 (0.91)	.84	.55***	.55***
7. University climate	3	4.64 (1.55)	.93	.15*	.25*

$p < .001$) for II, which were followed by perceived behavioural control ($r = 0.68$, $p < .001$ and $r = 0.43$, $p < .001$, respectively) in both cases.

Comparing the punctuation from the pre-test to the post-test, it can be observed that all the variables increased their means except the attitudes towards the behaviour, which remained stable, and the subjective norms, which decreased. Fig. 1 illustrates this.

Then, to compare whether the differences in the means between the variables in the pre-test and the post-test were statistically significant, a non-parametric test for related samples was performed since the sample was not normal ($p < .05$). We found statistically significant differences in the perceived behavioural control ($Z = -3.84$; Cliff's delta = 0.30) and in the entrepreneurship university climate ($Z = -3.00$; Cliff's delta = 0.25) variables, with significantly higher means for both variables in the post-test. Table 3 illustrates these results.

4.2. Casual conditions of having greater perceptions of entrepreneurial variables after taking sport entrepreneurship management education

To better understand the effects of ESME on sports science students, an analysis was performed with fsQCA to determine which combinations of variables resulted in greater positive differences between the post-test and pre-test means (Δ). Differences were calculated between the means of all the variables under study that were correlated with EI and II. In addition, the initial levels of II and EI were taken into account, as well as the sex, age and type of competitive sports practice of students (individual or collective). Table 4 shows the means of these variables and the percentiles (90th, 50th and 10th).

4.2.1. Necessary conditions

Subsequently, the first step was to test whether causal conditions were needed for the presence of the results (higher positive differences between the post-test and pre-test). The second step was to test whether the conditions were sufficient. In performing the analysis of the sufficient conditions in the truth table, Ragin (2008) recommends a minimum coherence threshold of 0.75. As seen in Table 5, none of the conditions were necessary for these outcomes since the consistency values did not exceed the recommended minimum of 0.90 (Ragin, 2008).

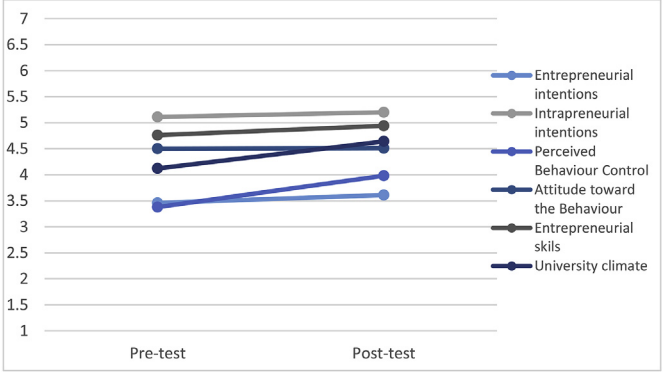

Fig. 1. Means of the pre-test and post-test of entrepreneurial and intrapreneurial intentions, perceived behaviour control, attitudes towards the behaviour, entrepreneurial skills and university climate.

Table 3
Non-parametric test for related samples of entrepreneurial and intrapreneurial intentions, perceived behaviour control, attitudes towards the behaviour, subjective norm and university climate.

Variables	Z	Cliff's delta
Entrepreneurial intentions	−.98	–
Intrapreneurial intentions	−.39	–
Perceived behaviour control	−3.84***	.30
Attitudes towards the behaviour	−.14	–
Entrepreneurial skills	−1.52	–
University entrepreneurship climate	−3.00**	.25

Table 4
Descriptive statistics for the variables and the calibration values used to convert the variables into fuzzy-set.

	Δ-EI	Δ-PBC	Δ-ATB	Δ-II	Δ-UC	Δ-ES	IEI	III	AGE
N	54	54	54	54	54	54	54	54	54
Median	.15	.65	.01	.08	.52	.18	3.46	5.11	22.19
SD	1.42	1.06	1.08	.98	1.01	.69	1.59	1.11	2.79
Min	−4.50	−1.83	−3.00	−2.37	−1.67	−1.00	1.17	2.17	20.00
Max	3.00	3.00	3.00	3.00	4.00	1.83	7.00	7.00	37.00
Percentiles									
10	−.83	−.90	−1.40	−1.00	−.67	−.67	1.55	3.22	20.00
50	−.08	.58	.00	.00	.33	.08	3.17	5.25	21.00
90	1.83	2.23	1.40	1.50	1.67	1.28	5.90	6.33	25.70

Note: Δ-difference between the post-test and pre-test. PBC-Perceived behavioural control, ATB-Attitudes toward the behaviour, III-Initial levels of intrapreneurial intentions, IEI-Initial levels of entrepreneurial intentions, UC-University climate, and ES-Entrepreneurial skills.

Table 5
Necessary conditions for Δ-PBC, Δ-ATB and Δ-II.

	Δ-PBC		Δ-ATB		Δ-II	
	Consistency	Coverage	Consistency	Coverage	Consistency	Coverage
IEI	0.630491	0.667883	0.593810	0.560219	0.654939	0.662409
~IEI	0.592162	0.652277	0.627176	0.615275	0.569689	0.599146
III	0.663221	0.678115	0.644584	0.586966	0.554804	0.541612
~III	0.592162	0.652277	0.642166	0.654510	0.715381	0.781666
TSP	0.281654	0.467143	0.311896	0.460714	0.354533	0.561429
~TSP	0.718346	0.575172	0.688105	0.490690	0.645467	0.493448
SEX	0.783377	0.519714	0.764990	0.452000	0.804691	0.509714
~SEX	0.216624	0.628750	0.235010	0.607500	0.195309	0.541250
AGE	0.733420	0.719476	0.712766	0.622729	0.741092	0.694128
~AGE	0.613695	0.737196	0.605899	0.648215	0.513306	0.588722

Note: Δ-difference between the post-test and pre-test. PBC-Perceived behavioural control, ATB-Attitudes towards the behaviour, II-Intrapreneurial intentions, III-Initial levels of intrapreneurial intentions, IEI-Initial levels of entrepreneurial intentions, UC-University climate, ES-Entrepreneurial skills, and TSP-Type of sport practise.

In the case of the other variables, as in the previous case, Table 6 shows that none of the conditions were necessary for the outcomes that were analysed (Δ-EI, Δ-UC and Δ-ES).

4.2.2. Sufficiency conditions

Next, the sufficiency analysis was performed for each of the variables related to entrepreneurial intentions in order to know which combinations generate greater positive differences in the perception of the variable after ESME. For the intermediate solution, the authors considered that the absence of all conditions would be conducive to high positive differences between the post-test and the pre-test. Only the two most important conditions were selected for each of the outputs, as most of them presented only two solutions. Table 7 shows the results.

According to Eng and Woodside (2012), a fsQCA model is informative when the consistency exceeds 0.74. The consistency (0.79-0.89) values of the twelve sufficient configurations were acceptable. Sufficient conditions explained between 35% and 55% of the empirical cases (Woodside, 2014).

In the case of the greater differences between the post-test and the pre-test of the perceived behavioural control variable, the two most important conditions were the following: (1) high initial levels of EI and II, the practice of a team sport at a competitive level and an older age (raw coverage: 0.28; consistency: 0.97) and (2) high initial levels of EI, the practice of a team sport at a competitive

Table 6
Necessary conditions for Δ-EI, Δ-UC and Δ-ES.

	Δ-EI		Δ-UC		Δ-ES	
	Consistency	Coverage	Consistency	Coverage	Consistency	Coverage
IEI	0.535538	0.494982	0.611963	0.566590	0.702381	0.675771
~IEI	0.607601	0.606703	0.618389	0.620844	0.565934	0.587173
III	0.619447	0.552620	0.646565	0.588129	0.702381	0.675771
~III	0.607601	0.606703	0.573900	0.587551	0.528388	0.568473
TSP	0.321816	0.465714	0.319822	0.462143	0.283883	0.442857
~TSP	0.678184	0.473793	0.680178	0.491429	0.716117	0.539310
SEX	0.769003	0.445143	0.762235	0.453529	0.741300	0.462571
~SEX	0.230997	0.585000	0.237766	0.601250	0.258700	0.462571
AGE	0.641658	0.549218	0.773109	0.679409	0.679945	0.627376
~AGE	0.655479	0.687015	0.552645	0.589041	0.571886	0.646146

Note: Δ-difference between the post-test and pre-test. EI-Entrepreneurial intentions, UC-University climate, ES-Entrepreneurial skills, III-Initial levels of intrapreneurial intentions, IEI-Initial levels of entrepreneurial intentions, and TSP-Type of sport practise.

Table 7
Two main sufficient conditions (intermediate solution) for greater positive differences between post-test and pre-test in PBC, ATB, II, EI, UC y ES.

Frecuencia cutoff: 1; Consistency cutoff	*Δ-PBC*		*Δ-ATB*		*Δ-II*		*Δ-EI*		*Δ-UC*		*Δ-ES*	
	.89		*.80*		*.87*		*.78*		*.82*		*.81*	
	1	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**
Inicial EI	●	●	●	○	●		○	●	●	●	●	●
Inicial II	●		○		○		●	○	●	○	●	●
Type of sport practice	○	○	○			●	○	○	○	○	○	○
Sex		●	●	○	●	○		●			●	
Age	●	○	○		●		○	○	●	○		●
Consistency	.97	.81	.78	.77	.89	.83	.80	.82	.85	.75	.85	.86
Raw coverage	.28	.28	.39	.14	.37	.17	.24	.21	.28	.21	.32	.26
Unique coverage	.11	.01	.33	.08	.17	.15	.11	.08	.16	.08	.08	.03
Overall solution consistency	.87		.79		.90.		.79		.80		.89	
Overall solution coverage	.55		.47		.46		.35		.46		.47	

Nota: ● = presencia de condición, ○ = ausencia de condición; todas las condiciones suficientes tenían una cobertura bruta adecuada entre. 14 y. 39; Δ-difference between post-test and pre-test. PBC-Perceived behavioural control; ATB-Atittude towards the behaviour: II-Intrapreneurial intentions; EI-Entrepreneurial intentions; UC-University climate; ES-Entrepreneurial skills.

level, being male and being younger (raw coverage: 0.28; consistency: 0.81). In relation to the major differences between the post-test and pre-test in relation to the ATB, the two most important combinations were the following: (1) high initial levels of EI low levels of II, the practice of a team sport at a competitive level, being male and being younger (raw coverage: 0.39; consistency: 0.78) and (2) low initial levels of EI and being female (raw coverage: 0.14; consistency: 0.77).

In relation to the major positive differences between the post-test and pre-test in intrapreneurial intentions, the two most important combinations were the following: high initial levels of EI, low levels of II, being male and being older (raw coverage: 0.37; consistency: 0.87) and practising individual sports at a competitive level and being female (raw coverage: 0.17; consistency: 0.83). In the case of the greatest positive differences between the post-test and pre-test in entrepreneurial intentions, the two most important combinations were the following: low levels of EI, high levels of II, the practice of a team sport at a competitive level and a younger age (raw coverage: 0.24; consistency: 0.80) and high levels of EI, low levels of II, the practice of a team sports at a competitive level, being male and being younger (raw coverage: 0.21; consistency: 0.82).

Finally, with regard to the most important combinations for the output of the greatest positive differences between the post-test and pre-test in the case of the university climate and the entrepreneurial skills, in the case of the first variable, the following were the most important combinations: high levels of EI and II, the practice of a team sport at a competitive level and an older age (raw coverage: 0.28; consistency: 0.85) and high levels of EI, low level of II, the practice of a team sport at a competitive level and a younger age (raw coverage: 0.21; consistency: 0.75). In the case of the second output (entrepreneurial skills), the two most important combinations were the following: (1) high initial levels of EI and II, the practice of a team sport at a competitive level and being male (raw coverage: 0.32; consistency: 0.85) and (2) high initial levels of EI and II, the practice of a team sport at a competitive level and an older age (raw coverage: 0.26; consistency: 0.86).

5. Discussion

This study seeks to present a method to incorporate an entrepreneurial approach into a sports management course (strategic

sports management) for the sports science degree. This incorporation is intended to meet the needs for the introduction of entrepreneurship in sports education that have been highlighted by various authors (Jones & Jones, 2014; Ratten, 2018; Ratten & Jones, 2018). This is needed because for the growth of the sports education sector, it is essential to find pedagogical strategies that allow students to be trained in a more coherent way and to adjust to the characteristics of the social and economic dynamics of today's market. Moreover, in Spain the research about sport entrepreneurship is scarce (González-Serrano, Valantine y Crespo, 2014), and until the best our knowledge, no empirical studies analysing the longitudinal effects of ESME have been found.

The results of this study show that the methodology used in this sport management subject does not have positive effects on the entrepreneurial intentions (H_1) or intrapreneurial intentions (H_5) of students in the sports sector, but it does have positive effects on perceived behavioural control (H_2), as some previous studies have shown (Falck et al., 2012; Fayolle et al., 2006; Fayolle & Gailly, 2015). This effect may be because intentions require more time to change, or, as Sieger et al. (2016) pointed out, they may be greater some time after they have finished their degree.

In relation to the attitudes towards the behaviour, although the students presented higher means in the post-test, these were not statistically significant (H_3). Although some previous studies pointed to the influence of the EE on this variable (Fayolle & Gailly, 2015) and some also suggested that the knowledge of entrepreneurs could promote it (Auken, 2013), in our case, no statistically significant variations were observed. This lack of variations may be because the direct contact that the students had with the entrepreneurs who came to the classroom was insufficient despite providing their email addresses to keep in touch. Therefore, based on the results that were obtained, it may be necessary to extend the time of direct contact between the entrepreneurs and the students.

On the other hand, although students also perceived their entrepreneurial skills more positively after the intervention, no statistically significant differences in entrepreneurship-related skills were found (H_4). Therefore, new methodologies or approaches should continue to be sought to develop these skills since they are related to both entrepreneurial and intrapreneurial intentions and are increasingly in demand by sports science graduates (González et al., 2017; Jones & Jones, 2014). In addition, this type of skill can help both the creation of new companies or businesses and their efficient management. This finding may also be because the duration of the course was not long enough or the strategic plan and the canvas infographics did not prove to be a valid instrument for this. Therefore, new tools or strategies should be sought to promote them, such as the development of a business plan or different teaching methodologies.

As for the university climate towards entrepreneurship, students perceived a statistically significant improvement in the university climate towards entrepreneurship after the ESME (H_6). These results are in line with Bergmann et al. (2018), who found that entrepreneurial measures carried out at the university affected students' perception of the university climate. However, to date, few studies have analysed the impact of entrepreneurship education on this variable through longitudinal studies.

These data are in line with those obtained by various authors (Duncan & Al-Nakeeb, 2006; Duncan et al., 2007) who highlighted the improvement in the perceptions of sports science students of their skills towards employability through the use of a problem-solving methodology. In this specific case, this improvement in employability is reflected as an improvement in the perception of the ability to start or create a business. Therefore, it seems that the methodology based on the analysis of real cases and problem solving is an effective learning and teaching strategy for sports science students if their employability is to be improved, which can be accomplished through the promotion of perceived behavioural control and the university climate towards entrepreneurship. These variables are correlated with entrepreneurial and intrapreneurial intentions.

The profile of the students who presented the greatest improvements in the perception of the variables related to entrepreneurship after receiving ESME were different for each of the analysed variables. However, although there is not a necessary condition, in most of the combinations, high initial levels of entrepreneurial intentions, practising or having practised a team sport at a competitive level and being a man were usually present. Therefore, as Fayolle and Gailly (2015) pointed out, the importance of the initial levels of EI is evident, which can be understood as the previous interest of students in entrepreneurship. Additionally, according to González et al. (2017), sports practice provides sports science students with certain entrepreneurial skills that must be transferred to the world of work. In this case, it seems that the skills they acquire through team sports can be more easily transformed into entrepreneurial skills. Lastly, with regard to the gender of students, these results also show that perhaps entrepreneurial education has a different influence on the students according their gender (Entrialgo & Iglesias, 2018).

All things considered, this data could help sport management policy makers to develop an updated curriculum according to the sport industry's current demands. ESME would allow from one perspective to fulfil the needs of sports employers, and from the other, the creation of new business in the sports sector. Such would result in the improvement of sports graduates' employability and in the decline of the youth unemployment rate in a European Union country with high levels of it. Moreover, due to the nature of sport itself, depending of the sport business type, it could contribute to resolve some social problems such as physical inactivity discrimination, obesity and other health problems as some sport entrepreneurs highlighted (Hemme, Morais, Bowers, & Todd, 2017), and contributes with personal well-being (García-Pascual, Silla-Merchán, Mundina, & Escamilla, 2016). For those reasons, the development of ESME will also present social value for the society.

5.1. Implications

Finally, it should be noted that this study presents some theoretical implications for the literature on entrepreneurship education. First, it contributes to the future lines of study proposed by Turner and Gianiodis (2018) that measure the effect of entrepreneurship education over time (longitudinal design) in other non-business disciplines, specifically sports. Second, we use the Ajzen TPB (1991) to measure both entrepreneurial and intra-entrepreneurial intentions and add new variables to that measurement (entrepreneurial

skills and the university climate towards entrepreneurship). This is in line with Fayolle and Liñán (2014) on the need for more studies to analyse the impacts of entrepreneurship on entrepreneurial intentions by taking into account their antecedents and including measures before and after the intervention (Fayolle & Gailly, 2015). Third, it contributes to the observation of several authors (Kamovich & Foss, 2017; Rideout & Gray, 2013) that entrepreneurship education practices are rarely well documented in empirical studies, and the intervention is not shown in detail (see Appendix 1). Finally, this study also contributes to understanding what characteristics of students ensure that entrepreneurial education will have the greatest impact on them. Although some authors (Fayolle & Gailly, 2015) had previously studied this topic, they had done so through linear regressions with no previous studies that used QCA. Thus, a new method of analysing the influence of EE on university students is proposed, and it contributes to a deeper understanding of how students' backgrounds influence them.

It also presents some practical implications. As the data from the study show, students in the sports sector show greater average intrapreneurial intentions or corporate entrepreneurship than average entrepreneurial intentions or intentions to create a company or business. Therefore, policies on these types of students should focus more on the development of entrepreneurial intentions and the related variables. In addition, this methodology has made it possible to improve the perception of perceived behavioural control and the university climate towards entrepreneurship, which are two variables that are correlated with the entrepreneurial and intrapreneurial intentions. It also highlights the importance of taking into account the characteristics of the students to whom entrepreneurship education is addressed in order to achieve greater results through such programmes. Therefore, a series of information is presented for the understanding of the optimal structure of the courses to develop entrepreneurship in other non-business disciplines.

5.2. Limitations and future research directions

However, these results should be taken with caution since they have some limitations. First, these results are from a very specific student population (one Spanish university), and they may not be generalizable to the whole population. Future research should replicate this methodology with sports science degree students from other communities or even countries. Moreover, in this study, the medium-long term effects of the interventions have not been taken into account. Therefore, in future research, analysis should be performed to determine whether the results remain the same three or six months after the intervention. Moreover, although this study includes QCA methodology, it is mainly qualitative, so future research should include a qualitative analysis approach, to better understand the effects of ESME in sport science students. Finally, it should also be highlighted that there is no control group. Because the subject was inside the curriculum, it was not possible to follow different methodologies with students who were enrolled in the same subject. For this reason, in future research, it should be convenient to use a control group in order to analyse the different group effects.

6. Conclusions

The methodology used during the sports management course is a good strategy to develop the perceived behavioural control and the perception of the university climate towards entrepreneurship. However, no statistically significant improvements were found for the other analysed variables. For this reason, it is necessary to develop more empirical research in the field of entrepreneurship sport management education to find new methodologies and instruments that have greater effects on the variables related to entrepreneurship.

As for the profile of students who presented greater improvements in the perception of the variables related to entrepreneurship, these were different for each of the variables. However, in the majority of them, the high initial levels of EI, the practice of a team sport at a competitive level and being a man were present. Therefore, it is important to take into account the existing characteristics or backgrounds of the students when designing the courses since the impacts of the EE are not always the same. Accounting for all of this will improve the employability of students in the sports sector and prepare them to succeed in today's and tomorrow's labour world.

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Appendix 1. Practical application of ESM

Entrepreneurship sport management education			
Academic year	2017–2018	Period	September–December
Subject	Sport Strategic Management	Number of sessions	8 sessions of 2 h each (16 h)

Objectives of the subject

General

To study the systems used by sports organizations and to elaborate, develop, implement and evaluate plans to achieve pre-established objectives or goals.

Specifics

- Objective 1: To promote the entrepreneurial spirit, innovation and creativity by introducing the experiences of entrepreneurs in the sports field into the classroom.
- Objective 2. To strengthen the skills of group work, proactivity, creativity, and the innovation and development of new services and products through the creation of the strategic plan.
- Objective 3: Learn how to plan and improve the performance of a sports organization through environmental analysis (SWOT) and the proposal of improvements through the use of new technologies (TIC).
- Objective 4: Use new information technologies as tools for the creation of Strategic Plans.

Competencies

1) Analyse and plan the organizational model of sports organizations and the processes related to the management of available resources.
2) Acquire the skills and knowledge of each of the essential tasks that are developed in the management of resources in sports.
3) Define the leadership skills, interpersonal relationships, teamwork, and habits of excellence and quality for professional practice
4) Know and understand the importance of strategic planning in the management and organization of sports.
5) Plan and develop projects for sports organizations and entities.
6) Develop skills for adapting to new situations and solving problems for autonomous learning
7) Develop socio-personal skills related to autonomy, a reflective attitude and teamwork with other students
8) Use information and communication technologies (TIC) in the development of the subject.

Number of students	2 groups of 30–35 students	Curs	4th Sports Science Degree (last year students
Methodology	Real-life examples, problem solving and cooperative learning		
Professors	- University lectures - Four sport entrepreneurs: 1) Social sport entrepreneur 2) Sport recreation entrepreneur 3) Sport technology entrepreneur 4) Sport technology and training entrepreneur		
Tools	Padlet, QR code and Infographic (easel.ly or canvas)		
Assessment	Pre-test in the first session and post-test survey in the last session (see instrument). Framework: Theory of planned behaviour of Ajzen (1991) + entrepreneurial skills + entrepreneurial intentions + university entrepreneurial climate.		
Contents			
Content 1	Strategic planning of organizations		
Content 2	Entrepreneurship and innovation in organizations and sports entities		
Content 3	Creating infographics and QR Codes		
Content 4	Creating and editing videos		
Development of the sessions			
Session 1 (2 h)	Complete the questionnaire (pre-test). The students were then asked to divide into groups of four. Once grouped, the students looked for different strategic plans hosted on the web, which allowed them to establish a common index for their strategic plan.		
Session 2 (2 h)	Share the indexes drawn up by the groups of students and specify the appropriate considerations. In this same session, the students began to create questions they considered necessary to acquire information from the entrepreneurs for the correct elaboration of the strategic plan (*padlet* application).		
Session 3 and 4 (4 h)	Presentations were made by different entrepreneurs from the sports sector (4 entrepreneurs, 2 per session) where they dealt with information related to the start-up of their business, the difficulties and inconveniences during their start-up, the current situation of their business and their future prospects. They also responded to the questions asked by the students. All the information gathered about the entrepreneurs by the students was collected in *padlet*. At the end of these sessions, each group had to order the entrepreneurs by preference to develop the strategic plan.		
Session 5, 6 and 7 (6 h)	The information gathered during the presentations of the entrepreneurs was shared between the students. They started to develop their strategic plan with the information obtained through the presentations together with the information available on the website. Additionally, students illustrated their specific contents by creating infographics, creating QR codes, and producing and editing videos. Then, the students created a strategic plan in Microsoft Word for one of the sport entrepreneurs. In addition, the students had to create a CANVAS model using an infographic (CANVA or EASEL.LY programs) where they attached a QR code to share a link that showed a three to 6 min video in which they summarily explained their strategic plan.		
Session 8 (2 h)	The infographics and videos produced in the previous session were presented. With this, the students visualized the infographics and videos made by their classmates and participated in their evaluations. Finally, the questionnaire (post-test) was administered again for completion, and opinions were shared about their experiences during this course.		

Appendix 2. Questionnaire

We are conducting a study to find out what students think about entrepreneurship. We would like to hear from you. The questionnaire is anonymous and your answers will be used globally for academic and scientific purposes. Please answer all questions

with only one answer. Thank you very much for yourcollaboration.

1	Do you practice or have you ever practiced a competitive sport?	YES	NO
2	What kind of sport?	Individual	Collective

Do you think you have a satisfactory level of the following capacities to be an entrepreneur? Indicate from 1 (no capacity at all) to 7 (very high capacity).

3	Opportunity recognition	1	2	3	4	5	6	7
4	Creativity	1	2	3	4	5	6	7
5	Problem solving	1	2	3	4	5	6	7
6	Leadership and communication skills	1	2	3	4	5	6	7
7	Development of knew products and services	1	2	3	4	5	6	
8	Networking and making professional contacts	1	2	3	4	5	6	7

To what extent do you agree with the following statements regarding your entrepreneurial capacity? Value them from 1 (total disagreement) to 7 (total agreement).

9	Start a firm and keep it working would be easy for me	1	2	3	4	5	6	7
10	I'm prepared to start a viable firm	1	2	3	4	5	6	7
11	I can control the creation process of a new firm	1	2	3	4	5	6	7
12	I know the necessary practical details to start a firm	1	2	3	4	5	6	7
13	I know how to develop an entrepreneurial project	1	2	3	4	5	6	7
14	If I tried to start a firm, I would have a high probability of succeeding	1	2	3	4	5	6	7

Indicate your level of agreement with the following statements from 1 (total disagreement) to 7 (total agreement).

15	I'm ready to make anything to be an entrepreneur	1	2	3	4	5	6	7
16	My professional goal is becoming an entrepreneur	1	2	3	4	5	6	7
17	I will make every effort to start and run my own firm	1	2	3	4	5	6	7
18	I'm determined to create a firm in the future	1	2	3	4	5	6	7
19	I have very seriously thought in starting a firm	1	2	3	4	5	6	7
20	I've got the firm intention to start a firm some day	1	2	3	4	5	6	7

If you worked as an employee of an established company, indicate the degree of agreement or disagreement with the following statements, where 1 means total disagreement and 7 total agreement.

21	I would try to generate new useful ideas within the company	1	2	3	4	5	6	7
22	I would try to develop new processes, services or products within the company	1	2	3	4	5	6	7
23	I would approach my tasks in an innovative way within the company	1	2	3	4	5	6	7
24	I would develop new ways of doing things within the company	1	2	3	4	5	6	7
25	I would try new things within the company even if there were possibilities of not working	1	2	3	4	5	6	7
26	I would get involved in activities that might not work well within the company	1	2	3	4	5	6	7
27	I would assume calculated risks within the company despite the possibility of failure	1	2	3	4	5	6	7

Indicate your level of agreement with the following sentences from 1 (total disagree) to 7 (total agree).

28	Being an entrepreneur implies more advantages than disadvantages to me	1	2	3	4	5	6	7
29	A career as entrepreneur is attractive for me	1	2	3	4	5	6	7
30	If I had the opportunity and resources, I'd like to start a firm	1	2	3	4	5	6	7
31	Being an entrepreneur would entail great satisfactions for me	1	2	3	4	5	6	7
32	Among various options, I'd rather be an entrepreneur	1	2	3	4	5	6	7

If you decided to create a firm, people in your close environment would approve of that decision? Indicate from 1 (total disapprovement) to 7 (total approvement).

33	Your close family	1	2	3	4	5	6	7
34	Your friends	1	2	3	4	5	6	7
35	Your colleagues and mates	1	2	3	4	5	6	7

Indicate your level of agreement with the following sentences from 1 (total disagreement) to 7 (total agreement).

36	The atmosphere at my university inspires me to develop ideas for new businesses	1	2	3	4	5	6	7
37	There is a favourable climate for becoming an entrepreneur at my university	1	2	3	4	5	6	7
38	At my university, students are encouraged to engage in entrepreneurial activities	1	2	3	4	5	6	7

39. Age: ___ 40. Sex: 1 Male 2 Female

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