

ENTREPRENEURIAL INTENTION OF HEALTH SCIENCES' STUDENTS IN THE CATHOLIC UNIVERSITY OF URUGUAY

INTENCIÓN EMPRENDEDORA EN ESTUDIANTES DE CIENCIAS DE LA SALUD DE LA UNIVERSIDAD CATÓLICA DEL URUGUAY

INTENÇÃO EMPRENDEDORA EM ESTUDANTES DE CIÊNCIAS DA SAÚDE DA UNIVERSIDAD CATÓLICA DEL URUGUAY

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Abstract: This research is a descriptive study that analyzes the survey conducted on 1088 university students by the Center for Entrepreneurial Development of the Catholic University of Uruguay in 2016, within the framework of the annual global study of the Global University Entrepreneurial Spirit Students' Survey organized by the University of St. Gallen-Switzerland, audited by the consultancy Ernst & Young. The main focus is to compare the entrepreneurial intentions of the university students of the Catholic University of Uruguay, in particular the students of Health Sciences, versus the rest of the students. It is hypothesized that the level of intention to undertake of students of Health Sciences is lower compared to the rest of the students of said University, being the environment of the university an influential factor in said variable. After a quantitative analysis of statistical associations (chi-square tests) and difference of

significant means, it is concluded that these students present a lower entrepreneurial intention than the rest of the students of the university expressed in percentage terms, but the differences are not statistically significant. However, it is noted that the environment, climate and study areas of the university favorably affect the intention to undertake.

Keywords: Occupations, Area Health Education Centers, Students, Health Occupations

Resumen: Esta investigación es un estudio descriptivo que analiza la encuesta realizada a 1.088 estudiantes universitarios por parte del Centro de Desarrollo Emprendedor de la Universidad Católica del Uruguay en el año 2016, en el marco del estudio mundial anual del *Global University Entrepreneurial Spirit Students' Survey* organizado por la Universidad de St. Gallen-Suiza, auditado por la consultora Ernst & Young. El foco principal es comparar las intenciones emprendedoras de los estudiantes universitarios de la Universidad Católica del Uruguay, en particular los estudiantes de Ciencias de la Salud, versus el resto de los estudiantes. Se plantea la hipótesis de que el nivel de intención de emprender de estudiantes de Ciencias de la Salud es menor respecto al resto de los estudiantes de dicha Universidad, siendo el entorno de la universidad un factor influyente en dicha variable. Tras un análisis cuantitativo de asociaciones estadísticas (pruebas chi-cuadrado) y diferencia de medias significativas, se concluye que dichos estudiantes presentan una menor intención emprendedora que el resto de los estudiantes de la universidad expresada en términos porcentuales, pero las diferencias no son estadísticamente significativas. Sin embargo, sí se constata que el entorno, el clima y las áreas de estudio de la universidad inciden favorablemente en la intención de emprender.

Palabras claves: Ocupaciones, Centros Educativos de Áreas de Salud, Estudiantes del Área de la Salud

Resumo: Esta pesquisa é um estudo descritivo que analisa o levantamento de 1.088 estudantes universitários pelo Centro de Desenvolvimento Empresarial na Universidade Católica do Uruguai em 2016, na pesquisa anual global de Pesquisa Global Universidade Empreendedora Espírito Students' organizado pela Universidade de St. Gallen-Suíça, auditada pela consultoria Ernst & Young. O foco principal é comparar as intenções empreendedoras dos estudantes universitários da Universidade Católica do Uruguai, em particular os estudantes de Ciências da Saúde, em relação aos demais estudantes. Hipotetiza-se que o nível de intenção de realização de estudantes de Ciências da Saúde seja menor em relação ao restante dos estudantes da referida Universidade, sendo o ambiente da universidade um fator influente na referida variável. Após uma análise quantitativa das associações estatísticas (testes qui-quadrado) e diferença de médias significativas, conclui-se que esses alunos apresentam uma menor intenção empreendedora do que os demais alunos da universidade expressa em termos percentuais, mas as diferenças não são estatisticamente significativas. No entanto, nota-se que o ambiente, clima e áreas de estudo da universidade afetam favoravelmente a intenção de empreender.

Palavras-chave: Ocupações, Centros Educacionais de Áreas de Saúde, Students, Health Occupations

INTRODUCTION

From Schumpeter, who analyzed the economic motivation of entrepreneurship, to present, where the importance of entrepreneurship teaching in universities is highly stressed, encouraging students to create their own companies, seeking greater personal satisfaction as well as reducing unemployment, remains a challenge(1-3). Focusing on 800 students in the Low Countries, Van Praag finds a strong association between the perceived situation of the entrepreneur and the willingness to become one. This varies among the different areas of study. While students of economic and business sciences, other areas of science, technical studies and humanities have a profile similar to the one of an entrepreneur, students of health and social sciences lack such a profile: "only 26% of health sciences students intend to become entrepreneurs after graduation, including pharmacy, dental studies, medicine and rehabilitation "(4). Significant differences were identified in some entrepreneurial characteristics of business administration students versus health sciences students. There were four aspects in which health science students showed more perseverance and responsibility than others, while administration sciences students showed to be more prone to risk-taking and greater creativity than the former (5). Another study developed in Finland concludes that due to changes in working habits, entrepreneurial skills are necessary in the field of health sciences. For this reason, education programs in health care should pay more attention to the entrepreneurial spirit in the curriculum. It establishes that only a few teachers in the field of health sciences teach about entrepreneurship, despite the fact that many of them cooperate with entrepreneurs and companies (6).

Entrepreneurship has long been considered a significant causal factor in national economic growth and development. While the entrepreneurial spirit has been studied for more than two hundred years, the interdisciplinary nature of the field has led to a variety of perspectives and to the need to develop a coherent framework of integration to explain the difference in business activity that is seen in different societies (7). The entrepreneurial spirit can be seen as a process that occurs over time (8). In this sense, the first step in the evolution, and sometimes of business creation processes, would be the intention to create one's own business; the intention to start a company is a necessary precursor for developing a business behavior (9). According to the Theory of Planned Behavior (TPB), people act according to their intentions and perceptions of control over behavior, while, in turn, their intentions are influenced by attitudes towards subjective behavior, influencing the context through norms and perceptions (10). Several studies support that the TPB is a good indicator of the intentions to create a business (11-13).

The GUESSS (Global University Entrepreneurial Spirit Students Survey) research design data for Uruguay will be used in this study. GUESSS is based on the TPB, as shown in figure 1. Its objective is to analyze the impact of the factors that influence the

choice of business activities: how is the university environment and education related to entrepreneurship, personal motivations, family situation, etc.

Regarding entrepreneurial intention in the health area, health services differ from other industries due to different factors such as their organizational structure, service provision and financing. Administrative and human management professionals need to better understand what is entrepreneurship in health care. Why do some professionals move beyond their traditional professional values to for-profit companies? What drives them to make changes in this unique industry? (16). The predisposing factors are those characteristics that are related to the motivation of an individual or group to act. In the context of health entrepreneurship, there are traits, types and characteristic dispositions that motivate an individual to undertake the necessary effort in the area (16). The differences in levels of entrepreneurial intention among students from different areas of study indicate that universities should focus their entrepreneurship education in other areas besides doing it in companies, engineering or technology sciences (4, 8).

In relation to entrepreneurship education, an important premise underlying these programs is that "entrepreneurs can be created": that it is possible to learn to be an entrepreneur through different policies and specific educational programs. In this way, students are expected to acquire self-esteem and motivation, become proactive, creative and learn to work as a team (17-19). The university environment, entrepreneurship education, courses, awareness workshops, all these comprise the student's environment and influence in their intention and possible actions as nascent entrepreneurs and generators of new jobs (20-24).

Regarding gender differences in business intention, it is shown that women are less likely to state the intensity of their intention than men, and that they have a higher aversion to risk (25). In Uruguay the study of the GEM (Global Entrepreneurship Monitor) in the report of the IEEM (2016) mentions that "in the case of women, the fear of failure started from quite higher levels (43.94% in the year 2006), began to fall sharply in 2011 and since 2013 has been rising again. In summary, the fear of failure tends to present similar levels between men and women, but in the case of the latter, it presents important variations over time. In recent years the fear of failure among women has been growing, surpassing the level of men "(26).

Based on the above, it is interesting to set the following objectives for the investigation. The general objective is to analyze the entrepreneurial intentions among Health Sciences students of the Catholic University of Uruguay. The specific objective is to compare the levels of entrepreneurial intention of these students with the rest of the students of the Catholic University of Uruguay (UCU), starting with the hypothesis that the level of intention to entrepreneurship of these students is lower than the rest of the students of the UCU, and also that the university environment positively influences the entrepreneurial intention of the students.

METHODOLOGY

An exploratory and descriptive quantitative study was developed through a self-administered questionnaire, hosted on the GUESSS website. Each participating faculty sent an email to their students containing the URL with the invitation to participate in the research. In Uruguay, the data was collected between April and July 2016.

The sample consisted of 1,088 responses from students of the Catholic University of Uruguay, made up of several faculties: Faculty of Human Sciences, Faculty of Engineering, Faculty of Law, Faculty of Business Sciences and Faculty of Psychology. In the area of health, the Faculty of Nursing and Health Technologies and the School of Dentistry both participated (27).

The answers were classified into two groups according to the study areas. In Medicine and Health Sciences (hereinafter referred to as MCS), 89 responses were obtained in the area (8.2% of the total), while the rest of the areas (hereinafter UCU) yielded 999 responses (91.8 % of the total). In "all UCU" both groups will be considered.

For data processing, the SPSS V.23 statistics package was used. Independent means comparison and independence chi-square tests with a 95% confidence interval were used as well, and also a uni and bivariate analysis with presentation of results, similar to the GUESSS Global Report (28).

RESULTS

Demographic information on sex, age and education levels show that the proportion of women in MCS (88.8%) is much higher than the average UCU (56.5%). In contrast, in the range of up to 24 years of age the average MCS is lower than that of UCU. In the ranges of 25 to 30 years old and from 31 onwards the average is higher than that of UCU. There are significant differences between the two groups, both in terms of gender (sig. <0.01) and in terms of ages (sig. <0.05). The older age average is in MCS students. Most of the answers gathered correspond to undergraduate students, both for MCS and UCU.

Although the two groups are compared in terms of study areas, it is important to clarify that there are also other variables that affect career intention and entrepreneurial intention responses, such as age and gender.

The students were consulted about their intention to choose a career, right after they graduated and five years afterwards. As shown in Table 1, in both cases there is a significant decrease in the intention to work in a company five years after finishing school, although it is striking that, in the case of MCS students, interest in working in a NGO following graduation has a substantial increase. Continuing education has also an important increase. In the case of founding their own company five years after graduation, the intention increases in both cases, but is higher for UCU (59.5%) than for MCS (46.6%). Although there is an association between the variables, study area and career intention, there are no significant differences in the samples.

Regarding the entrepreneurial intention, values for founding a company as an option (Table 1) are always slightly higher in men (even more in the case of MCS); but the greatest differences are appreciated when the factor of continuing in the family business is introduced.

Table 1: Entrepreneurial intention upon graduation and five years later, by gender

	MCS				UCU			
	Upon graduation		5 years after		Upon graduation		5 years after	
	Male	Female	Male	Female	Male	Female	Male	Female
Employee	60,0%	84,6%	20,0%	37,2%	77,4%	80,1%	24,2%	27,7%
Founder	20,0%	9,0%	60,0%	44,9%	11,3%	9,6%	61,1%	58,4%
Successor	10,0%	0,0%	10,0%	2,6%	6,8%	5,2%	8,1%	4,5%
Other	10,0%	6,4%	10,0%	15,4%	4,5%	5,1%	6,6%	9,4%
Total	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Source: Personal Collection (2017)

Table 2 shows that the entrepreneurial intention (multi-items) according to Liñan & Chen presents similar net values for MCS and UCU as to whether they have a positive attitude or a strong intention to become an entrepreneur. In net balances, MCS stands out (29).

Table 2: Averages and net balances of entrepreneurial intention

	STATEMENT	AVERAGE		NET BALANCE	
		MC S	UC U	MCS	UCU
1	I am willing to do anything to become an entrepreneur.	4,0	4,1	2,5%	5,5%
2	My professional goal is to be an entrepreneur.	4,9	4,8	36,7%	34,2%
3	I will do all what I can to create and manage my own business.	5,0	4,9	43,2%	40,3%
4	I am decided to create a company in the future.	5,0	4,9	42,5%	38,0%
5	I have very seriously thought in starting a business.	4,6	4,8	28,8%	34,7%
6	I have a firm intention to create a business some day.	5,0	5,1	38,3%	43,6%

Source: Personal Collection (2017)

Analyzing the net balances of the total averages by statement (sum of those in agreement minus those in disagreement, ranges between -100% and + 100%), the greater weight is observed in the students of UCU in the agreement of their entrepreneurial intention to create their enterprise.

Despite what the table shows, there is no statistical association between these statements and the study area. We observed a few cases of association with the variables gender and age. In conclusion, gender and age have a higher incidence than other variables, like the university environment. This does not imply that the career intention is not affected by the university environment and the easiness to start a business, but that they are not directly associated. Structural models more advanced could demonstrate what is the articulation of these variables for the promotion of entrepreneurial intention.

To identify nascent and active entrepreneurs, the students were asked two questions to determine more specifically their career intention:

- Are you currently starting your own business / becoming self-employed?
- Are you currently operating / managing your own business or are you already self-employed?

The first question showed statistical association with the study area (sig 0.029); however, the second question did not (sig. 0.22). This is an indication of the importance of exploring other variables, since age and gender are associated with both. Regarding the intention to start their own business, there is a significant difference between both groups (sig 0.029), where the UCU students have a greater tendency to do it than their MCS counterparts (24% vs. 13%). Based on these two answers, three categories were configured, mentioned in the GUESSS International Report and are used in this work.

In table 3, comparing nascent and active entrepreneurs by gender it shows that UCU male nascent entrepreneurs (22.3%) have a greater intention than males of MCS (10.0%). On the other hand, for active male entrepreneurs, MCS percentage (20.0%) is higher than UCU (12.6%). For women, values show little difference and they are less prone than men. The differences are statistically confirmed, with an association of less than 0.05 for the age variable and less than 0.01 for the gender variable.

Table 3: Comparison of nascent and active entrepreneurs by gender

	MCS		UCU	
	Male	Female	Male	Female
With no intention now	70,0%	84,8%	65,0%	79,6%
Nascent entrepreneur	10,0%	10,1%	22,3%	10,8%
Active entrepreneur	20,0%	5,1%	12,6%	9,5%
Total	100,0%	100,0%	100,0%	100,0%

Source:
Personal
Collection
(2017)

Table 4 analyzes students who are in the process of creating a business (nascent entrepreneurs) and those who have their own business (active entrepreneurs). For nascent entrepreneurs, a slight increase in age for the first two age groups is observed for both MCS and UCU. In students over 31 years of age in MCS is zero, and in the students of UCU it drops by 1%. For active entrepreneurs the big difference for MCS (3.7%) and UCU (17.5%) is in the age group of 25 to 30 years.

Table 4: Comparison of nascent and active entrepreneurs by age range

	MCS			UCU		
	Up to 24 ys	25 to 30 ys	More than 31 ys	Up to 24 ys	25 to 30 ys	More than 31 ys
With no intention now	86,4%	81,5%	77,8%	78,3%	65,4%	61,7%
Nascent entrepreneur	11,4%	14,8%	0,0%	15,4%	17,1%	16,7%
Active entrepreneur	2,3%	3,7%	22,2%	6,3%	17,5%	21,7%
Total	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Source: Personal Collection (2017)

In relation to the university environment, the results are similar on average, but analyzing the net balances, UCU is much higher than MCS. The inspiration to develop business ideas by the environment is 34.8% (UCU) versus 19.3 % (MSC), the favorable conditions to become an entrepreneur are 46.7% (UCU) versus 20.7% (MTS) and the motivation to get involved in entrepreneurial activities is 47.9% (UCU) versus 26.7% (MSC) .

Regarding the net balances of the total averages (Table 5), it can be clearly seen that UCU students consider that the courses and services they received at the university really increased their motivation to start a business, as well as their skills to carry it out, more than the MCS students. (Differences of significant means). Only the study area association is confirmed with statement 2 (sig 0.039). In terms of the university's environment, it is interesting to note that the gender variable does not show statistical association with the perception and assessment of the environment; instead, age does; it is a variable associated with the three statements with significance less than 0.01.

Table 5: The courses and services I attended:

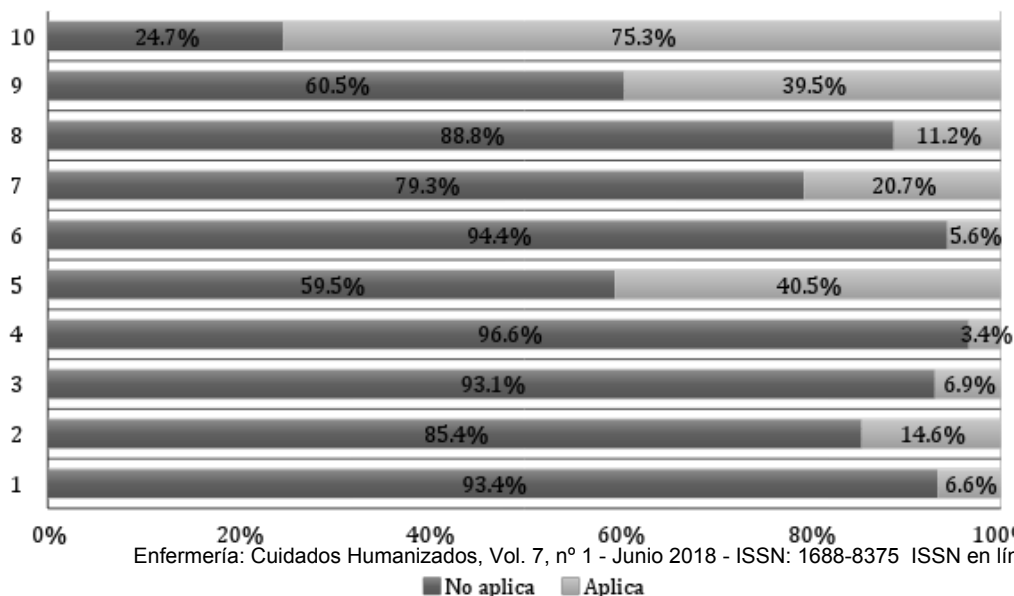
		AVERAGE		NET BALANCE	
		MCS	UCU	MCS	UCU
1	...increased my understanding of attitudes, values and motivations of entrepreneurs.	4,8	4,7	38,6 %	39,3 %
2	...increased my understanding of the actions needed to perform in order to start a business.	4,1	4,7	4,7%	38,1 %
3	...increased my practical administrative and managerial skills to enable me to start a business.	4,3	4,6	14,0 %	35,6 %
4	...increased my ability to develop networks.	4,0	4,4	-4,7%	26,3 %
5	...increased my ability to identify an opportunity.	4,5	4,8	26,7 %	41,4 %

Source: Personal Collection (2017)

The type of entrepreneurship training they received in the university is shown in Graph 1. In UCU, 20.7% have participated in at least one elective entrepreneurship course compared to 11.2% in MCS. On the other hand, they attended a compulsory course of 40.5% at UCU level, compared to 5.6% at MCS.

Only two statements showed statistical association with the study area. "... increased my understanding of the actions needed to perform in order to start a business" (sig 0.025) and "... increased my ability to develop networks" (sig 0.0002). In addition, significant differences in means are observed in the first statement. The average is 4.6 for UCU versus 4.3 for MCS and in the second is 4.4 for UCU versus 4.0 for MCS. Students feel that in UCU networks can be developed and in MCS they feel more left on their own, isolated.

Graph 1: Survey of entrepreneurship training received in the university (light bars training received) Source: Personal Collection (2017)



Statistical association is found in four of the five statements presented in the previous table with the study areas. "I have not attended a course on entrepreneurship until now", "I have attended at least one compulsive course of entrepreneurship", and "I have chosen this university mainly for its high reputation in entrepreneurship", are three sentences that have a statistical significance less than 0.01 with the study area. "I have attended at least one elective course of entrepreneurship" showed a statistical association lower than 0.05, and "I am studying a specific program in entrepreneurship" did not show a statistical association with the study area.

DISCUSSION

Although the difference in the entrepreneurial intention in favor of UCU students compared to MSC is not significant, in the study presented by Van Praag, the same relationship between the study areas is comparatively obvious. It is specified that 26% of the health sciences students show intentions to start a business, while in the present investigation there are 46% (MSC).

The values obtained in intentions to be a founder were slightly higher in males (even more so in the case of MCS), confirmed by several studies that show the gender differences in the business intention. Women are less prone to state the intensity of their intention and have a higher aversion to risk (25) (30) (15). The study of the GEM Global Entrepreneurship Monitor in the report of the IEEM Uruguay (2016) mentions that "in the case of women the fear of failure started from considerably higher levels (43.94% in 2006).

In relation to the university environment, analyzing net balances, UCU is much superior to MCS in supporting and motivating entrepreneurship, perhaps influenced by having specific courses and a greater broadcast of the workshops offered. The literature establishes that "entrepreneurs can be created", that it is possible to learn to be an entrepreneur through different policies and specific educational programs, seeking the development of motivation, proactivity, creativity and teamwork (3, 8, 17-19). It is interesting to note that the gender variable does not show statistical association with the perception and assessment of the university environment, while age is an associated variable. Regarding the training received on entrepreneurship in the University, in UCU 20.7% have participated in at least one elective course of entrepreneurship compared to 11.2% in MCS, while they attended compulsory courses 40.5% at the level UCU vs. 5.6% in MCS.

The study developed in Finland shows the presence of a minority of teachers in the field of health that educate about the entrepreneurial spirit (6; 1). One possible cause may be the absence of specific training for teachers and the development of academic programs in the area. A large number of studies have indicated that education in entrepreneurship raises the positive perception of the entrepreneurial spirit, as well as attitudes and intentions, although there seems to be less evidence to suggest that entrepreneurship education affects real behaviors related to entrepreneurship (31).

CONCLUSIONS

Regarding the specific objective of the study, the conclusion is that UCU students have a higher level of intention to create their own business than MCS students. The variable associated with the career intention is not only the area of study but also their gender and age. This must be analyzed more deeply in future studies.

Regarding the hypotheses proposed, it is not statistically corroborated that "H1: the level of intention to start a business in Health Sciences students is low compared to the rest of the students of the UCU". Even though there are percentage differences by area of study, showing UCU greater entrepreneurial intention than MCS, only some of the statements showed significant differences by area of study. Not all the statements proposed by the conceptual framework for the measurement of entrepreneurial intention are confirmed in this sample studied.

On the other hand it is confirmed that "H2: the environment of the university positively influences the entrepreneurial intention of the students of the MCS and UCU", evidencing that the environment and climate of the university favorably affect the intention to create their own business, presenting the conditions to encourage business intentions through entrepreneurial education, awareness courses and workshops.

In summary, regarding the general objective of the study, it has begun to explore and describe the intentions of entrepreneurs of the Health Sciences students of the Catholic University of Uruguay, showing signs of the need to integrate and reinforce the teaching of entrepreneurship in all the faculties.

Finally, considering limitations, solutions and future guidelines, starting from the Theory of Planned Behavior (TPB) that indicates that the intention is considered as the best predictor of behavior, the temporal dimension of the present study does not allow to corroborate in the medium and long term the evolution of the students, their intentions and endeavors. The TPB prediction should be used focusing on other conditions, such as social, cultural, and historical conditions that may be influencing training and, therefore, entrepreneurial intentions, and not only in individual situations.

The development of entrepreneurship courses in an interdisciplinary and transversal way in the University, as well as the promotion of methodologies, events and workshops, are proposed as possible solutions to the identified problem.

In later studies, a longitudinal and explanatory research should be developed in order to establish relationships between cause - effect variables over time.

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