

## **A LOOK AT ENTREPRENEURSHIP IN NUTRITION: RESEARCH AMONG STUDENTS AND GRADUATES OF A UNIVERSITY COURSE IN THE COUNTRY SIDE OF MINAS GERAIS**

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**Abstract:** The understanding of the interrelationship between professional training and involvement in activities related to entrepreneurship, such as acting in the junior enterprise (JE), are the focus of this study's investigation, a topic little explored in the academic context. This work analyzed the experiences, involvement with the subject during graduation and the desire to undertake, as well as the entrepreneurial potential of students and graduates of a university course in Nutrition. 57 individuals participated in this research, with a median age of 23 (19-33) years, 82.5% female. The results revealed that 70% of respondents were interested in undertaking in the area and that 54.4% had a superior entrepreneurial profile. Need for training, time, skill development and attention to market needs were factors cited as relevant to prepare them. However, participation in JE and courses on entrepreneurship and related areas, considered important cogs in the entrepreneurial ecosystem, was low, 43.8% and 14%, respectively. There was no statistical difference regarding the entrepreneurial profile score, considering participation or not in the JE. The desire to be an entrepreneur and a potential entrepreneur was evidenced among students and graduates. There is a need for further studies that assess the distance between this desire and the path taken for the development of entrepreneurial skills.

**Keywords:** Entrepreneurship. Company. Nutrition Sciences.

## INTRODUCTION

The various economic, operational, technological and managerial transformations have increased the demand for professionals capable of adapting and supporting institutional changes. There is a growing need for entrepreneurial and innovative initiatives in business spaces that aim to solve problems of different dimensions, such as in

the economic and social spheres.<sup>1, 2</sup>. Thus, entrepreneurs are those who perceive market pain as opportunities to develop personally and professionally, offering unique products and/or services<sup>2</sup>.

Initiative; persistence and daring; commitment to quality and efficiency; investment of time and effort in favor of pioneering ideas; setting goals; planning and monitoring of actions and self-confidence are skills valued in this scenario. They can be honed in multiple environments that together form the entrepreneurial ecosystem, comprising fairs/exhibits, technical laboratories, innovation contests and business plans, innovation centers/agencies, among others. It is worth noting that curricular subjects and junior companies are also important cogs in this ecosystem<sup>2</sup>.

The discussion about the relevance of including entrepreneurship in the curriculum has expanded in recent years, as a strategy to encourage students to identify opportunities for work and income<sup>3</sup>. University institutions (HEIs), attentive to the needs of the market, have already included disciplines and activities in their matrix with the aim of awakening and/or developing entrepreneurial skills among their students. However, the perception of the importance of this debate did not happen homogeneously among the different areas of knowledge, it was more appropriated by the exact and technological sciences<sup>3, 4</sup>.

There are undergraduate courses with difficulty in assimilating such transformations, which include the participation of their students in activities and actions that promote creative, viable and profitable reflections. In this perspective, courses inserted in the area of biological and health sciences stand out, especially the Nutrition courses, whose technical prerogative sometimes overlaps with the dynamics of social, cultural and economic changes in the population<sup>5</sup>. The great challenge

of professional training in this century is to promote the theory/practice connection from the identification of demands and deliver to society, professionals who act as agents of transformation<sup>1,3,5</sup>.

Despite the relevance of the theme, there are few works in the literature that evaluated the entrepreneurial skills of university students and strategies for the development of such characteristics. Articles in Portuguese using the keywords: entrepreneurship, students, university students and nutrition were not found in the main research bases. Given the above, this research analyzed the experiences, involvement with the subject during graduation and the desire to undertake, as well as the entrepreneurial potential of students and graduates of a university course in Nutrition.

## METHOD

This was a cross-sectional study with a qualitative and quantitative approach. All students and graduates aged 18 or over from a Nutrition course at a federal public university were invited to participate. Those who did not meet the age criteria, did not answer the questionnaires during the data collection period or refused to participate were excluded from the research. The interviewees were subdivided into the following groups: Students linked to the EJ of the course, Graduates linked to the EJ, Students not linked to the EJ of the course and Graduates not linked to the EJ.

The project was approved by the Ethics Committee for Research with Human Beings (CEP) of the University, CAAE number: 23845919.7.0000.5153. Data collection was carried out in December 2019. This was done through the application of two questionnaires made available electronically through the Google Docs platform, whose access link was sent by email to the participants.

The first questionnaire included questions

related to the social and academic profile of the participants and their knowledge and entrepreneurial experiences. We sought to identify gender, age, entrepreneurial experience and desire to undertake. The data collected in this questionnaire were analyzed in the light of the content analysis methodology<sup>6</sup>. The second evaluated and classified university students and graduates according to their entrepreneurial profile.<sup>7</sup>

For the analysis of quantitative data, the software SPSS Statistics v. 20. Descriptive statistical analysis was performed, with the results expressed in absolute and relative frequency. The Mann Whitney test was applied to compare the medians of the entrepreneurial profile scores. A significance level of 5% was considered.

## RESULTS AND DISCUSSION

This study had 57 participants, 82.5% (n=47) female and median age of 23 (19 - 33) years. Of these, 38.6% (n=22) were graduates who worked in the job market or were looking for a job and 43.8% (n=25) had or had some link with the JE of the Nutrition course (Table 1).

Categories	n	%
Egress linked to the EJ	6	10,5%
Egress not linked to the EJ	16	28,1%
Student affiliated with EJ	19	33,3%
Student not affiliated with EJ	16	28,1%
Total	57	100,0%

Table 1 - Categorization according to the link with the Nutrition course and participation in the junior company. Paranaíba River, Minas Gerais, Brazil, 2019.

There is an appreciation of skills and competences aimed at decision-making, communication, leadership, administration and management during professional training in the National Curriculum Guidelines for

the Undergraduate Course in Nutrition. According to Amorim et al. (2001)<sup>8</sup>, university institutions must promote training that enables professionals to have a broad, citizen, critical and competitive vision, integrating the historical context and local reality, in addition to the development of specific work skills.

It is important to reflect on entrepreneurship in the context of the Nutrition course, because there is a curricular pattern with a predominance of technical training disciplines, sometimes disconnected from market demands. Research carried out on the e-MEC portal revealed that among the 12 universities with a maximum course concept (value equal to 5), only 6 offered disciplines on entrepreneurship and/or related areas<sup>9</sup>. The report 'Entrepreneurship in Brazilian Universities'<sup>10</sup>, showed that although 69% of university students wanted to undertake in the short term, only 28.4% had taken a course related to the subject during graduation. The situation is complex, few courses offer disciplines in the area, and when such disciplines are offered there is low adherence.

It was found in the present study that 36% (n=21) of respondents wanted to take a course on entrepreneurship and related areas, but only 14% (n=8) had already done so, not having been specified whether during graduation. This result falls short of that observed among university students in the country, since approximately 46% of those with an entrepreneurial profile had taken a discipline in the area<sup>10</sup>.

The interlocution between teaching, initiation to research and extension can favor autonomy regarding the development of the curricular path, opening the way for an entrepreneurial perspective on the field of professional activity. For this, it is necessary that undergraduate courses in nutrition and in other areas of health rethink their pedagogical practices and the segmented training model,

inspired by Descartes, beyond the simple offer of disciplines. The structuring of a curriculum needs to consider what kind of professional one wants to form and in which society he will be inserted. Both aspects permeate the chosen pedagogical strategies<sup>11,12</sup>.

The "Global Entrepreneurship Monitor Brazil" (2020)<sup>13</sup> revealed that among the initial entrepreneurs, 27.6% had completed university, the highest percentage of the four levels of education evaluated in the survey, hence the importance of Universities as generators of debates and spaces for reflection.

If, on the one hand, the curriculum is important, it is not solely responsible for training that dialogues with the job market: the experiences of students prior to entering universities modulate the application of knowledge. The report 'Entrepreneurship in Brazilian Universities' revealed that more than half of university students, entrepreneurs or with entrepreneurial potential, had previous experiences<sup>10</sup>. Study with university students from the administration course, carried out by Iizuka and Moraes (2014)<sup>14</sup> showed that 90% (n=149) of respondents had already worked or had some contact with entrepreneurship, of these 69% (n=115) were interested in undertaking or opening their own business. Lumertz (2015)<sup>15</sup> found that 79% (n=15) of nutritionists had some experience before starting their own business. In this study, entrepreneurial experiences such as working in a small business or having a family member or friend who has already opened a business were reported by 73% (n=41) of the respondents, 74% (n=42) wanted or had already thought about opening their own business and 70% (n=40) would like to undertake in the field of Nutrition.

According to Barbosa et al. (2015)<sup>3</sup>, entrepreneurship can be understood as a dynamic process that involves cultural, economic, personal and social aspects. It is the

development of processes with the purpose of transforming ideas into unique and viable business opportunities<sup>16, 17</sup>. Despite the complexity of the concept, or precisely because of it, the respondents' perception of the term entrepreneurship proved to be fragmented. It was related to the idea of development (n=6), work (n=6), strategy (n=4), opportunity (n=5) and innovation (n=23). The latter was related by the respondents to the originality of the business. However, innovation is considered to be the creative use of pre-existing ideas to improve products and/or services; establish and consolidate new market niches; to develop raw materials, among others<sup>17, 18</sup>.

Some characteristics such as creativity, strategy, vision, self-confidence, adding and generating value, ability to take risks, dedication and effort to create something that promotes rewards and satisfaction are necessary for an entrepreneur<sup>3</sup>. In this research, aspects emerged associated with the concept of entrepreneurship that actually relate to the skills and competencies needed by the entrepreneur: creativity (n=9), determination (n=2), initiative (n=2), courage (n=1), dynamics (n=1) and vision (n=3). Understanding the concept of entrepreneurship is the basis for the development of new business models<sup>19, 20</sup>, and it is important to know how to differentiate the skills needed for what is effectively configured as entrepreneurship.

From the perspective of the entrepreneurial profile, which takes into account entrepreneurial skills, it was observed that 54.4% (n=31) of the university students interviewed had a higher profile and 35.1% higher average (Table 2), revealing considerable potential among assessed individuals.

Entrepreneur Profile	Score	n	%
Lower	0   — 40	0	0
Lower Middle	41   — 80	0	0
Medium	81   — 120	6	10,5
Upper Middle	121   — 160	20	35,1
Upper	161   —   200	31	54,4
Total		57	100,0

Table 2 - Classification of the entrepreneurial profile according to the entrepreneurial profile analysis instrument. Paranaíba River, Minas Gerais, Brazil, 2019.

When investigating the fields of interest for opening new businesses among university students in this study, the areas of Collective Food, Clinic, Education and Technology stood out. In Collective Food, the desire for services included in the following segments was cited: confectionery, snack bar, cafeteria and restaurant, with emphasis on the production of healthy foods and packed lunches. Food consultancy, activities in the party and hospitality market were also mentioned. Among the nutritionists interviewed by Lumertz (2015)<sup>15</sup>, 74% undertook (n=14) in the area of production of meals and food products; 15% (n=3) in the areas of Clinical and Sports nutrition, considering the opening of an office, supplement store, SPA, gym and the maternal-infant segment; furthermore, 11% (n=2) of the professionals worked in the Education and Training area producing video lessons, cooking workshops and developing applications. It is observed in both studies the emphasis on the field of Meal Production. Despite this sector having suffered stagnation as a result of social distancing to contain the COVID-19 pandemic in its initial stage, the food market had been showing a growth trend of 85.8% in the period between 2010 and 2016<sup>21</sup>. TO eat away from home is a reality for the Brazilian population, as the Family Budget Survey revealed that 57.9% of people eat away from home<sup>22</sup>.

When analyzing the entrepreneurial profile scores obtained by university students, no statistical difference was observed between the groups - whether or not they had a link with the JE (Table 3).

	<b>Affiliated with EJ</b> Median (Min.-Max.)	<b>Not affiliated with EJ</b> Mediana (Min.-Max.)	<i>p</i>
Graduates	173,5 (141 – 193)	176,5 (102 – 193)	0,825
Students	149,0 (85 – 200)	154,00 (88 – 186)	0,791
Everybody	152 (85 – 200)	167,5 (88 – 193)	0,459

EJ: Junior company; Min.: Minimum; Max.: Max. Mann Whitney test;  $p < 0,05$ .

Table 3 - Score of the entrepreneurial profile, according to the link with the Junior Company of the Nutrition course. Paranaíba River, Minas Gerais, Brazil, 2019.

Respondents with employment had as main motivations: personal development, interpersonal contact, professional development and prominence in the job market. They believed that their participation could contribute to practical experience in the business universe, acquisition of experience, gain of knowledge in the area of activity and learning in the area of entrepreneurship, which can be the differential when compared to those who do not participate in the EJ. Also, the students understood the benefits or advantages of participating in the EJ to be: 1) improvement in interpersonal relationships (such as making friends, listening to others, respecting opinions, helping others, learning to work in groups); 2) personal development (improvement in communication, personal growth, proactivity, leadership); 3) academic and professional improvement (gain of knowledge, market experience, application of knowledge, experience in the areas of nutrition, deepening in nutrition beyond clinical, sports

and social, fulfillment of extracurricular hours). Among graduates, participation in the junior company, considering the job market, contributes to learning how to deal with people, solving problems quickly and accurately, seeking new ideas and solutions, having a broader perspective, being proactive, not giving up, establish networks of contacts, work as a team, share jobs and responsibilities, seek success and always study. The main limitations or disadvantages reported were: lack of time, rush, lack of student engagement, high task turnover and lack of projects to put into practice.

Among those who participated in the company, 76% (n=19) reported having the desire to undertake. Thus, participating in the EJ contributed to the development of an entrepreneurial vision on the part of the students, even if this did not occur in an integral way. Ferreira and Freitas (2013)<sup>23</sup> analyzed the interest in entrepreneurship in up to 5 years among students participating or not in EJ. The authors found a greater intention to open a business among those who belonged to the first group (88%, n=66), to the detriment of the second (68%; n=60).

The different expectations informed by the respondents of this study when starting out in JE may have conditioned the development of entrepreneurial skills. Which does not mean that the 24% who completed their participation without the desire to undertake did not improve their skills to some degree. From these analyses, it is suggested that new studies that consider the triangulation of qualitative and quantitative methods can contribute to a better characterization of the student entrepreneur potential in universities.

From the perspective of the respondents of this work, some aspects emerged as relevant factors to prepare them to undertake: 1) need for training, which is linked to the words: studies, preparatory courses, learning,

experience, discipline of entrepreneurship focused on nutrition during graduation; 2) time, related to the idea of organization, persistence, commitment; 3) skill development, which emerged from the terms innovation, determination, focus, dreaming, courage; and 4) market needs, which was linked to attention to market demand, a partner who knows and understands administration and entrepreneurship, opportunity and capital to invest. In this sense, the JE contribute to training, training future professionals for the organizational environment, meeting the needs imposed by the market; while contributing to economic development and positively impacting the university context<sup>24</sup>. Similar impressions regarding aspects related to entrepreneurship were shared among university students participating in the reports.: “*Entrepreneurship in Brazilian Universities*”, standing out, in this case, as reasons that justify the lack of interest in undertaking, the fact of never having thought about the subject, scarcity of resources, lack of knowledge, little time to dedicate and financial instability<sup>10</sup>.

A challenge that presents itself in the university context, especially in health courses, is the introjection of the entrepreneurial culture, a situation observed by Castro et al. (2014)<sup>25</sup> who pointed out the lack of strategies experienced in university that could contribute to its propagation. Thus, the look turns again to the process of formation of the individual. The study of Guimarães (2003)<sup>26</sup> reinforces the need to rethink the pedagogical project and the curriculum of the disciplines, which must consider not only the stages of the processes, the analysis of opportunities and the viability of business, but also the dialogue between knowledge, practices and entrepreneurial attitudes, aligning the characteristics students’ personal skills to the development of skills, through active methodologies.

## CONCLUSION

The desire to undertake and an entrepreneurial potential was evidenced among students and graduates. If, on the one hand, there are reports of the need to create disciplines and new spaces, as well as actions that stimulate the analysis of market opportunities and the creation of business models, by the University where they are inserted. On the other hand, students need to take the lead in the process of developing their entrepreneurial skills.

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