Emotional Intelligence and Academic Performance in Students of the Bachelor of Nutrition

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Education for centuries has focused on the intellect, leaving aside the emotional factor, which impacts the mental health of students and, in turn, academic performance. The objective is to establish the relationship between emotional intelligence with academic performance in university students. It is multicenter with a quantitative approach; sampling is non-probabilistic. The TMMS-24 meta-knowledge trait scale about emotional states was applied to measure Emotional Intelligence. In the academic performance, the general average of the participants was used. There is a relationship between levels of emotional intelligence with academic performance. The information is useful for proposing intervention strategies during the training of emotional competencies from admission.

Keywords: emotional intelligence, school performance, nutrition, college, learning

INTRODUCTION

In Mexico, two contrasting problems observed in nutrition coexist. On the one hand, we can feel the epidemic of obesity, both in childhood and in adulthood, on the other hand, serious problems of malnutrition are observed; both situations derive from various deficiencies and imbalances, which propitiates a brake on economic development of the country and to solve these inequalities; it requires greater investment in prevention and promotion policies, as well as strengthening the health care engine (Torres and Rojas 2018). In this context, the need to strengthen training programs for human resources in health is indisputable integrating multidisciplinary teams that provide comprehensive care to major health problems derived from social inequalities. In these spaces, the nutrition graduate plays a very important role since it is empowered from its conceptualization, as described by the Mexican Association of Members of Faculties and School of Nutrition, as the professional who applies the science of food and nutrition, to promote correct nutrition

and health, contributing to the prevention and treatment of diseases, thus optimizing the state of nutrition and health of individuals, groups, communities, and populations, under an ethical framework with quality standards and continuous education, applying the inter, multi and transdisciplinarity of nutrition. For this, the study programs must be structured around six professional fields (Figure 1); In the first field, the sectors, institutions, organizations and virtual spaces of various social contexts interact and become involved, thereby understanding a set of aspects, properties and relationships that are abstracted from the application of food and nutrition science, whose The purpose is aimed at favoring the applicability of proper nutrition, as well as the nutrition and health of individuals, groups, communities and populations, permeating the fields of insertion in the labor market, which is conceptualized as the space in which develops professional activity financially remunerated for the exercise of their specialized knowledge. In recent years, there has been a change in the work centers and the work of the nutritionist within their professional performance, with a tendency in the labor market to be inserted simultaneously in various areas and professional fields (AMMFEN, 2021).

FIGURE 1
PROFESSIONAL FIELDS OF THE GRADUATE IN NUTRITION
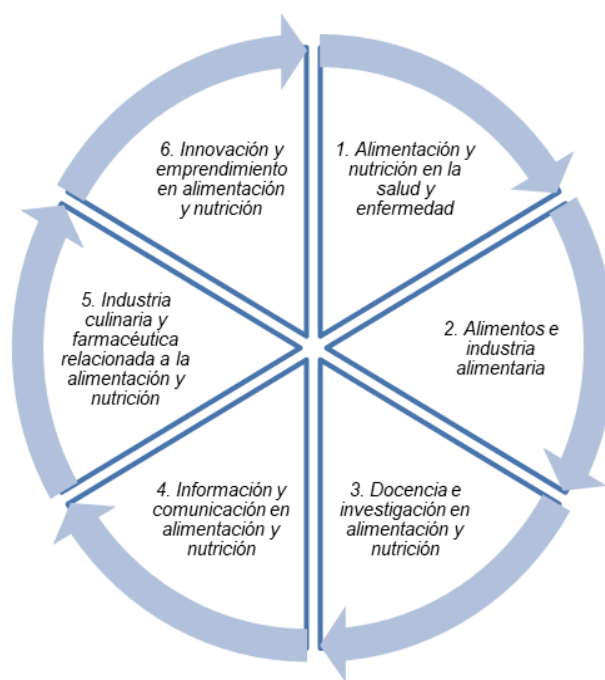
The nutrition professional in his professional work constantly establishes interactions with vulnerable groups that also suffer from some pathology; This contact can start from the early stages of their formation, requiring an empathic, flexible, critical and supportive attitude, which will allow them to provide comprehensive care to the person (Sundararajan and Gopichandran, 2018); However, due importance has not been given to the countless emotions experienced by students, who go from self-knowledge of the sensations they perceive, to the emotional regulation they exercise when assuming responsibility for the care of a person, not only socially and biologically, but also emotionally, due to all that living, feeling and sharing together with the human being who cares for during their stay in a hospital implies; For this reason, in undergraduate health students, it is vital to strengthen emotional education through emotional intelligence (EI) (Torres-Zapata et al., 2022).

A logical sequence for the student during his professional training at a higher level, consists of accrediting the subjects and achieving sufficient grades to obtain a degree and perform in the professional field; however, to achieve these goals, it is necessary to have a healthy EI. Various studies suggest that 80%

of academic and/or work success depends on EI and only 20% on IQ. The foregoing allows us to infer that, in order to promote comprehensive training, it is necessary to develop in undergraduate students the ability to conceptualize personal emotions, develop comprehension to understand the feelings of others, and the social ability that allows interaction among others; all of them being fundamental aspects in the person, which are established in the Sustainable Development Goals and the United Nations Organization, as determinants for the establishment of healthy social relationships (Arntz and Trunce, 2019).

Empirical assumptions hold that being cognitively intelligent is not enough to guarantee academic, professional, and personal success (Lampreia-Raposo et al., 2022). Despite this, the traditional approach in educational contexts has prioritized intellectual and academic aspects. of the students, suggesting that the emotional and social spheres were independent of the training processes since intelligence was perceived as unifactorial, with IQ being its main element. Currently, there is a new postulation where intelligence is assumed to be multifactorial, incorporating emotions as a contributing element, leaving aside the belief that cognition and emotion were disparate and opposed entities. These new positions make it possible to underline the importance of emotions and the need to design long-range research within the field of Emotional Intelligence (EI) and with various insertion fields (clinical, educational, etc.), to determine criteria on and beyond what was predicted by general intelligence (Chang & Tsai, 2022).

In one of its many conceptions, emotional intelligence is considered the ability to monitor feelings and emotions of oneself and others, to discriminate between them and to use this information to guide action and behavior. Own thinking, integrating four basic skills: 1) to accurately perceive, assess and express emotions, 2) to access and/or generate feelings that facilitate thought, 3) to understand emotions and emotional knowledge and 4) to regulate emotions promoting emotional and intellectual growth. Given the need to refine the ability to predict student success, scholars in the field incorporate other variables that allow a greater predictive capacity of performance and adaptation (Sundararajan and Gopichandran, 2018); among which is EI, which has become a psychological construct that is as interesting as it is controversial, since being conceptualized in very different ways by the authors, it constitutes the most recent psychological development in the field of emotions and refers to the interaction between emotion and cognition, which allows the individual to function adapted to their environment (Arntz and Trunce, 2019).

Interest in determining the relationship between emotional intelligence, academic success, and emotional adjustment of students has been increasing in recent years, leading to the study of the relevant role of emotional skills in learning (Salovey and Mayer , 1990), promoting a theory of EI in the academic literature, with the interest of incorporating emotional intelligence into educational curricular development, through emotional education to improve transit in the classroom (Vasefi et al., 2018). This suggests a close relationship between the development of understanding the consequences and emotional regulation from an early age (Torres-Zapata et al., 2022). For this reason, the family and the school are the fundamental areas in their development. Numerous authors have suggested that the acquisition of emotional skills should be a prerequisite in the training of students; that is, the domain of emotions must anticipate access to traditional academic inputs. For this reason, the formation of socio-emotional competencies of students is a necessary and even essential task for a large part of teachers (Dolev et al., 2019). This has generated great expectations towards emotional education. Some authors point out that, even though the road traveled has been short, the accumulated scientific knowledge must be analyzed (Lampreia-Raposo et al., 2022), to reorient the training process with a comprehensive perspective, given that the acquisition of these skills can offer a response to the current demands of society, to provide from childhood, all the tools to lead a successful adult life. Even more so in the current context, where hypermodern societies seek their citizens to be satisfied with their lives (Chang and Tsai, 2022), where success is perceived as the consequence of early learning in the use of these social and emotional skills to cope productively with life changes, since they reduce the risk of mental health problems (Sundararajan & Gopichandran, 2018) and improve psychological well-being (Vasefi et al., 2018), reflected in well-being during adulthood.

Emotional skills begin to be forged at home, at different ages, and to varying degrees. This favors that children, when entering the educational system, present variability in emotional levels, for this reason, the school is established as the ideal place for the promotion of EI (Dolev et al., 2018), it allows the teacher to face not only to teach, in many cases also to transform the emotional capacities or affective deficiencies of

their students. Hence the importance of the emotional competencies of teachers, as it will, in addition to promoting student learning, also boost their own well-being and work performance (Roth et al., 2018). The variability in the adaptation of individuals to their environment through emotional aspects has generated a renewed interest in the study of the influence of emotional intelligence on academic performance and its relationship with motivational, attitudinal and other affective aspects (well-being, satisfaction), which are constant during the teaching-learning process; This growing search for information on the determinants that influence academic success and emotional and social competence, to date, has not yet yielded solid results, even some findings are contradictory (Mintle et al., 2019); For this reason, the importance of consolidating EI in educational contexts, both in teachers and in students, is clear. The idea is that educational institutions emphasize in their pedagogical curricula not only the cognitive aspects but also promote the adequate management of the emotional and interactional aspects since these are associated with academic performance, psychological adjustment, and job performance. Jacques Delors for Unesco (1996), refers to pedagogy, the construction of the personal and social life project, which must be structured on four fundamental pillars: learning to be (ethical dimension), to know (knowledge dimension), to do (dimension of praxis) and to live together (interaction with others), which will allow the integral development of students (Páez and Castaño, 2015).

Undoubtedly, comprehensive training is a pillar in university life and the search for professional and citizen success (Torres et al., 2021). Education is the watershed in emotional formation, values , and self-care, which is assumed as the planned and systematic development of self-knowledge, self-control, empathy, communication, and interrelation skills (Arntz and Trunce, 2019). Enabling the construction of broad horizons and a sociopolitical world, which demands skills to live in a community, such as trust in others and respect for plurality, which are characteristics of the EI construct (Torres and Sosa, 2020); being the development of skills related to EI, influential factors with a positive impact on the social, academic and labor dimensions (Lampreia-Raposo et al., 2022) Various studies report that emotionally intelligent students have greater self-esteem, adaptation, well-being, and emotional and interpersonal satisfaction, quality of interactional networks, social support, and less willingness to present disruptive, aggressive, or violent behaviors; they also have lower degrees of anxiety and depression symptoms. . These factors are favorable to academic performance, because it favors coping with situations of academic stress and less consumption of addictive substances (Sundararajan & Gopichandran, 2018). EI is linked to some aspects such as emotional control, the ability to negotiate, self-motivation, persistence, empathy, and the quality of interpersonal relationships. In addition, it is a basic component in leadership, emotional stability and flexibility, the ability to adapt, and the management of frustration and uncertainty (Chang and Tsai, 2022); for this reason, it can become a factor that predicts good performance in educational and work contexts. All these elements contribute to professional success, prosperity, prestige, satisfaction and quality of life, so academic performance is not the only variable associated with success, EI also has a high impact (Dolev et al., 2019).

There is a positive relationship between EI skills and aspects such as academic performance, psychological well-being, interpersonal relationships and the reduction of disruptive behaviors; these aspects can be categorized into four areas, according to the effects on students inside and outside the school classroom: academic performance, well-being and emotional balance, establishing and maintaining quality in interpersonal relationships and the emergence of disruptive behaviors. Thus, university students with high EI use active coping strategies to a greater extent in solving problems and have more significant positive relationships and resilient potential (Arntz & Trunce, 2019). Similarly, there is a close relationship between academic performance, social skills, and the quality of interpersonal ties (Vasefi et al., 2018); Several studies highlight the importance of controlling the variables that impact their development and personality since students with impulsive tendencies and deficits in emotional control present difficulties in adapting to the social environment in general, both in academic contexts and in the work environment. ; The relationship between EI and professional work is also clear (Roth et al., 2018). On the other hand, some authors point out that emotional intelligence levels have an impact on students' mental health and that this psychological balance is related to final performance. Currently, there are different ways to measure this aspect which, according to the theoretical proposal, the assessments can include from questionnaires to self-

reports (Mintle et al., 2019). It is important to emphasize that people with poor emotional skills are more likely to experience stress and emotional difficulties during their studies. On the contrary, those who benefit from the use of adaptive emotional skills find it easier to face the difficulties that academic performance represents. Therefore, errors in the emotional spheres can be remedied through the development of EI (Lampreia-Raposo et al., 2022). This study aims to obtain information that allows to know the feasibility of application in the school context and determine the need to incorporate intervention strategies for forming emotional competencies in the curriculum, from the entrance and in a transversal way.

The general objective of this work is to establish the relationship between the components of emotional intelligence with the academic performance of Nutrition students. The silver hypothesis is that students with adequate levels of attention, comprehension, and regulation of emotional intelligence have better academic performance. The resulting information will be extremely important for decision-making in updating educational programs.

DEVELOPMENT

Materials and Methods

The proposal is multicentric, with a quantitative approach; the results were obtained from the registration, analysis, and interpretation of statistical data. Concerning the analysis and scope of the results, the study is descriptive - correlational since the state of the variables and their relationships were observed; later, the theoretical foundations and the study phenomena of the variables were established, as well as the relationship between these. The population is made up of university students with the degrees in nutrition from three Higher Education Institutions (IES) in southeastern Mexico, with a non-probabilistic sampling, following the criteria of convenience, accessibility and availability of the participants, including all of the students enrolled in the August-December 2021 school year. Those students who enrolled but, for personal, economic, and family reasons, among others, did not finish the cycle were excluded.

The research protocol was submitted for approval by the Scientific Ethics Committee in each participating institution and with an approving opinion. The informed consent was presented before the explanation of the objectives of the study by the researchers, and the signing of the consent document was requested; likewise, an informative meeting was held with managers, teachers, and students to publicize the objectives of the research, its application, and its importance. The information obtained was anonymous and confidential, following the law of confidentiality of use of personal data. The results obtained were handled with professionalism and care of the institutional image. The meta-knowledge trait scale on emotional states TMMS-24 by Salovery and Mayer was applied, adapted to Spanish, which measures Emotional Intelligence (Table 1); This instrument consists of 24 items, subdivided into three subscales or dimensions. The Likert-type scale of five items, the score is through a coding of items with scores 1-2-3-4-5, being: 1= Not at all in agreement, 2= Somewhat in agreement, 3= Quite in agreement, 4= Strongly agree and 5= Totally agree. Each component provides information on emotional perception or attention, emotional clarity, and emotional repair or regulation (Arntz and Trunce 2019 and Jamba-Pedro et al., 2021) (Table 1). The instrument was digitized and programmed using the Google Drive Form tool, which was applied from November 22 to December 10, 2021, to the undergraduate students in nutrition belonging to the three IES.

TABLE 1
COMPONENTS OF EMOTIONAL INTELLIGENCE IN THE TMMS-24

Emotional Perception or Attention	Emotional Clarity	Emotional Repair or Regulation
Definition: It is the awareness of one's own emotions, the ability to recognize feelings in oneself and know what they mean.	Definition: It is the faculty to know and understand emotions, knowing how to distinguish between them, understanding how they evolve and integrating them into thought.	Definition: It is the ability to regulate and control positive and negative emotions.
Ítems: 1, 2, 3, 4, 5, 6, 7 y 8.	Ítems: 9, 10, 11, 12, 13, 14, 15, 16.	Ítems: 17, 18, 19, 20, 21, 22, 23, 24.
Internal consistency 0.90.	Internal consistency 0.90.	Internal consistency 0.90.
Male cutoff points: Pays little attention < 21 Adequate attention 22 to 32 Pays too much attention >33	Male cutoff points: Must improve clarity < 25 Adequate clarity 26 to 35 Excellent clarity >36	Male cutoff points: You must improve your repair < 23 Adequate repair 24 to 34 Excellent repair >36
Female cutoff points: Pay little attention < 24 Adequate attention 25 to 35 Pays too much attention >36	Female cutoff points: Must improve clarity < 23 Adequate clarity 24 to 34 Excellent clarity >35	Female cutoff points: You must improve your repair < 23 Adequate repair 24 to 34 Excellent repair >35

The academic performance was determined through the general average of the participants, since it integrates the results of the three learning sequences, where knowledge is evaluated (Being, Knowing, Knowing how to do). The information was stored in an encrypted file. The educational institution provided the average. Records exported from the Google Drive Form to an Excel database were analyzed. The collected information was processed and analyzed with the Statistical Package for the Social Sciences version 20 software. To determine emotional intelligence, percentages, frequencies, means, standard deviation, maximum and minimum values were extracted; the Pearson test was applied to determine the correlation between emotional intelligence and academic performance.

Results and Discussion

A paradigm shift on the conceptualization of EI implies rethinking the IQ theory, which focuses on mathematical and linguistic skills to predict academic performance and professional success but does not contemplate subsequent evolution; that is, it does not study the relationship between EI and the success of individuals based on the set of social and emotional competencies that it encompasses (Torres and Sosa 2020); For this reason, the present investigation proposes the analysis of the components of emotional intelligence and its relationship with academic performance; The resulting information could be useful in decision-making for updating the educational programs under study. Table 2 shows the data of the study population; participation of 469 students in the nutrition career of three Higher Education Institutions (IES) in Mexico can be observed, being 29.85% male and 70.85% female, aged between 18 and 56 years (mean of 21.01 ± 4 years).

Academic performance in university students represents a strategic indicator for the assessment of educational quality in higher education; This is the result of different factors that intervene in the student's academic life. It is defined as the value attributed to the student's achievement in their academic performance through the grades obtained. It almost always involves a quantitative assessment of student achievement, whether satisfactory or not, and is directly related to dropout or academic success. The value of the academic grades achieved has been used as an indicator of academic performance and it is assumed that the grades represent the achievements in the different components of learning in academic life. These components include personal, academic, and social aspects (Torres-Zapata et al., 2020). In the present

study, the average academic performance is 84.88 ±10.97, with an average number of learning units completed at the time of the investigation of 6.8 ±1.59 and an average failure rate of 0.44 ±0.92 (Table 2). The residence of Nutrition students is predominantly urban (84%), and according to the Pearson chi-square test, there is no association between residence and academic performance (p = 0.494), which coincides with Arntz and Trunce, 2019, that reinforce the non-existence of a relationship between residence and academic performance (p = 0.426). About 43% of the students in this research come from various municipalities, different from where the bachelor's degree is taught, and 16% have a rural residence, which motivates a transfer to a new urban center or daily mobilization, with displacements of up to 1 or 2 hours to get to the place where they take their classes. This reality is not different from other public universities throughout the country (Bru-Luna, et al., 2021).

Getting involved in university life generates multiple and significant personal and vital changes in the student, being more complex for those students who move from other locations and/or communities, for whom change requires adaptation to a new environment and lifestyle. The transfer can generate a feeling of uprooting from the family and have a negative impact or, on the contrary, it can generate more free time and allow a faster integration into the university environment, with a positive impact (Torres-Zapata et al., 2020). The fact of coming from a different city suggests that a percentage of students need longer periods of adaptation due to the family and social uprooting to which they are subjected, this could be a disadvantage compared to those who are not forced to travel geographically. 83.58% of the students of the Nutrition major live with their parents, while only 7.89% live alone; this, according to the analysis of Pearson's chi-square test, shows that there is no association between who the subject lives with and academic performance (p = 0.546). Social support acts as an enhancer in the satisfactory performance of the students, being the family the main source of support. Students who live with their parents have greater support, affective containment, and have fewer responsibilities, which would translate into greater dedication to study; in addition, it facilitates the integration and establishment of new social relationships for the student, for which it could be expected better performance in this group (Carballeira, M., Marrero, B., & Abrante, D. (2019).

Concerning the schooling of the parents of the nutrition students, it was found that 56.06% of the mothers have higher education than complete secondary education. In the case of the fathers, it is presented in 59.98%; In general, higher education predominates. When analyzing the association with Pearson's chi-square test, it was determined that there is no significance between the schooling of the mother (p = 0.0765) and father (p = 0.0689) with academic performance, similar to what was reported by Arntz and Trunce, 2019, but not with the findings of Espejel and Jiménez (2019), since they found that the educational level of the parents is a family factor that affects the academic performance of the students, that is, that students with parents with university studies tend to perform better in school. Parent education improves the way family members interact by fostering the adoption of cognitive scripts, beliefs, and values that are related to academic behavior and are related to achievement (Abuya et al., 2018). The educational level of the parents, on average, helps determine the expectations of their children's participation in higher levels of education (Dockery, Koshy, & Li, 2022).

TABLE 2
GENERAL CHARACTERISTICS OF THE STUDY POPULATION

Item		Total	University 1	University d 2	University 3
Total	f	469	46	304	119
	%	100	9.81	64.82	25.37
Female	f	329	37	200	92
	%	70.15	7.89	42.64	19.62
Male	f	140	9	104	27
	%	29.85	1.92	22.17	5.76
Age	☐	21.01 ± 4	21.04 ± 2.33	21.07 ±4.35	20.86 ±3.44

			Col1	Col2	Col3	Col4
Note		☐	84.88 ±10.97	84.2 ±6.28	87.22 ±6.08	79.13 ±17.81
Reprobation		☐	.44 ±.92	0.3 ±0.78	0.31 ±0.65	0.83 ±1.34
Number of courses		☐	6.8 ±1.59	7.59 ±1.11	7.15 ±1.38	5.58 ±1.66
Rural		f	75	12	52	11
		%	15.99	26.09	17.11	9.24
Urban		f	395	34	252	109
		%	84.22	73.91	82.89	90.76
They live	Friends	f	2	0	1	1
		%	0.43	0	0.33	0.84
	Parents	f	401	42	260	99
		%	85.50	91.3	85.53	83.19
	Relatives	f	29	2	16	11
		%	6.18	4.35	5.26	9.24
	Alone	f	37	2	27	8
		%	7.89	4.35	8.88	6.72
Mother	No studies	%	0.85	0	0.99	0.84
	Truncated primary	%	5.97	4.35	4.93	9.24
	Finished primary	%	11.30	8.7	13.16	7.56
	Truncated secondary	%	5.33	6.52	5.59	4.2
	Finished high school	%	17.91	23.91	17.43	16.81
	Truncated high school	%	1.92	0	0	7.56
	School completed	%	20.26	34.78	15.46	26.89
	Truncated degree	%	4.69	4.35	4.93	4.2
	Finished bachelor's degree	%	27.51	13.04	31.25	21.85
	Truncated mastery	%	0.43	0	0.66	0
	Finished master	%	0.21	4.35	5.26	0
	Truncated doctorate	%	0	0	0	0
	Doctorate finished	%	0.43	0	0.33	0.84
Father	No studies	%	0.85	0.00	0.66	1.68
	Truncated primary	%	4.26	2.17	3.62	6.72
	Finished primary	%	5.76	4.35	6.58	4.2
	Truncated secondary	%	2.56	0.00	2.3	4.2
	Finished high school	%	15.35	28.26	12.5	17.65
	Truncated high school	%	8.53	8.70	8.88	7.56
	School completed	%	17.06	39.13	13.16	18.49
	Truncated degree	%	5.33	2.17	6.91	2.52
	Finished bachelor's degree	%	31.34	13.04	33.55	32.77
	Truncated mastery	%	0.00	0.00	0	0
	Finished master	%	7.46	0.00	9.87	4.2
	Truncated doctorate	%	0.00	0.00	0	0
	Doctorate finished	%	1.28	2.17	1.97	0

Table 3 shows the average of the scores obtained by institution and gender in the TMMS-24, considering the values established by the authors of the scale, which show the cut-off points for men and women since there are differences in the scores for each of them. The levels of attention, understanding and regulation behave uniformly among the institutions, with a predominant adequate level. It was possible to observe no significant differences in the levels of attention, comprehension, and regulation of emotional intelligence between HEIs.

TABLE 3
MEAN EMOTIONAL INTELLIGENCE SCORES BY INSTITUTION AND GENDER

IES	Gender		Components		
			Attention	Compression	Regulation
University 1	Female	☐	26.59 ±7.16	26.62 ±8.2	26.84 ±7.52
		Level	Appropriate	Appropriate	Appropriate
	Male	☐	22.22 ±5.5	27.11 ±6.12	24.22 ±7.53
		Level	Appropriate	Appropriate	Appropriate
University 2	Female	☐	27.7 ±6.27	26.36 ±7.49	27.25 ±7.08
		Level	Appropriate	Appropriate	Appropriate
	Male	☐	27.67 ±6.52	28.57 ±7.31	29.94 ±6.53
		Level	Appropriate	Appropriate	Appropriate
University 3	Female	☐	26.64 ±6.35	24.7 ±6.69	26.36 ±6.91
		Level	Appropriate	Appropriate	Appropriate
	Male	☐	28.15 ±7.66	26.67 ±6.96	28.22 ±8.73
		Level	Appropriate	Appropriate	Appropriate

Source: self-made

According to the results obtained from the TMMS test in this study, the mean of the participants for the attention component was 27.35, for the comprehension component, it was 27; while, for regulation, the average score was 28.39 (Table 4). These values are within the appropriate range for the three levels, results similar to those studied by Cejudo et al., (2016); Fragoso (2018) and Arntz and Trunce (2019).

TABLE 4
MEAN EMOTIONAL INTELLIGENCE SCORES OF ALL THE PARTICIPANTS

Components	Female		Male	
	☐	Level	☐	Level
Attention	27.28 ±6.42	Appropriate	27.41 ±6.84	Appropriate
Compression	25.93 ±6.42	Appropriate	28.06 ±7.24	Must improve
Regulation	27.57 ±7.15	Appropriate	29.24 ±7.23	Appropriate

Source: self made

In the Attention to Emotions subscale, which measures the frequency with which one thinks about emotions, 31.34% of the students are below average. That is, they do not realize or pay attention to their emotions. While in the sub-scale of clarity in Emotional Perception (measures the ability to understand one's own state of mind), 63.33% of nutrition students demonstrated not having this ability. In the last subscale of the TMMS test, Strategies to Regulate Emotions, by joining the results of the students who showed average and above average ability, 26.23% do not know how to moderate their emotions, and 73.78% know how to moderate them emotions (Table 5).

When performing the association according to Pearson's chi-square test between the variables and components of emotional intelligence, it is observed that there is no significance between residence and clarity (p = 0.174) and regulation (p = 1.144); however, if it exists with attention, specifically in the female gender (p = 0.003).

TABLE 5
MEAN EMOTIONAL INTELLIGENCE SCORES WITH THE DIFFERENT SUBSCALES

Components	Total		Female			Male		
Level of attention	F	%	F	%	□	F	%	□
Pay little attention	147	31.34	119	25.37	20.25 ±2.93	28	5.97	17.14 ±3.64
Adequate attention	253	53.94	174	37.10	30.04 ±3.13	79	16.84	27.49 ±2.82
Pay too much attention	69	14.71	36	7.68	37.43 ±1.20	33	7.04	35.94 ±2.41
Understanding level								
You need to improve your clarity	297	63.33	222	47.33	19.03 ±3.97	75	15.99	19.63 ±3.93
Adequate clarity	172	36.67	107	22.81	30.2 ±3.17	65	13.86	29.97 ±2.91
Excellent clarity	0	0.00	0	0.00	0 0	0	0.00	00
Regulation level								
You need to improve your regulation	123	26.23	97	20.68	18.84 ±3.3	26	5.54	18.04 ±4.1
Adequate regulation	254	54.16	172	36.67	29.02 ±3.14	82	17.48	29.3 ±3.46
Excellent regulation	92	19.62	60	12.79	37.71±1.66	32	6.82	38.19 ±1.42

Source: self made

According to the ANOVA statistical test of the total scale and the three subscales of the TMMS test, the present study concludes that there is a statistically significant correlation between academic performance and emotional intelligence (attention –p = 0.02-, comprehension – p = 0.05- and regulation – p = 0.08-), as shown in his study by Pérez (2013), with a strong positive correlation between the Strategies to Regulate Emotions subscale (p = 0.06) and no correlation with the components of attention and comprehension, this differs from what was argued in the research by Arntz and Trunce (2019), since they found no significant differences between the level of attention (p = 0.829), the level of comprehension (p = 0.963) and the regulation level (p = 0.501), with the grade average. It is inferred that, when finding adequate levels of EI, there will be better control of emotions and less distress. It is also possible to observe that, the higher the EI, the levels of self-efficacy will be better (Lampreia-Raposo et al., 2022). Similarly, it is perceived that emotionally intelligent students, as a general rule, have better levels of psychological adjustment and emotional well-being, in addition to presenting better academic performance and can better cope with stressful situations (Carballeira, Marrero, & Abrante, 2019). Cobos-Sánchez, Flujas-Contreras, and Gómez-Becerra, (2017) showed that high levels of EI (TMMS) predicted better psychological and emotional well-being in adolescents, that is, less anxiety symptoms and depressive stages, as well as less tendency to have intrusive thoughts. On the other hand, it was observed that those students classified as depressed presented a lower academic performance than the students classified as normal. The results of this study allowed us to glimpse certain non-academic components that affect the student's school performance. The study highlighted connections between school performance and EI; Specifically, it showed that intrapersonal emotional intelligence influences the mental health of students, and this psychological balance, in turn, is related to and affects final academic performance.

The development and stimulation of emotional intelligence come to influence an improvement in the daily life of the human being, people who are highly emotionally effective, have skills, competencies, and characteristics beneficial for social coexistence, such as labeling feelings instead of people or situations,

know how to distinguish between thoughts and feelings, assume responsibilities, show respect for others, practice a positive value of negative emotions and avoid people or situations of conflict. Therein lies the importance of stimulating emotional balance, directly impacting the quality of life (Bru-Luna, et al., 2021). Therefore, it is recommended to study other tests that measure emotional intelligence and compare the results, depending on gender, culture, and age, to have reliable information that allows incorporating educational innovations, a product of the research, in the improvement of teaching practice and curriculum development.

CONCLUSIONS

Human beings are increasingly concerned about achieving success, living better, controlling emotions, and expressing them better. It is recognized broadly that EI is essential for the academic training of undergraduate students, specifically in the nutrition degree. It is of interest for strengthening the competencies related to their humanistic function, given the interaction with individuals, since empathy, responsibility, awareness, self-knowledge, the ability to face stressful situations, and the social skill that allows social interaction. The understanding of EI is a complex aspect, involving aspects of the individual, social and cultural sphere, enabling the involvement of the individual with their own emotions and the social relationships that they establish based on them, as well as their personal and professional development, starting from of the acquisition of socio-emotional competences, from the entrance in the academic life of the health area.

Based on the results obtained, it is determined that, in the undergraduate students of a degree in nutrition, the components of EI (attention, understanding, and regulation) behave uniformly among the institutions studied, with an adequate level predominating, in addition, it is observed that there are no significant differences regarding the levels of attention, understanding and regulation of emotional intelligence between HEIs. According to the results obtained in this investigation, it is concluded that there is a relationship between the levels of emotional intelligence with academic performance, but it was identified in the literature, the existence of divergent results regarding the relationship between emotional intelligence and academic performance, however, these results will serve as input for the planning of specific intervention strategies for the formation of emotional competencies from admission, which must be part of the generic competencies in an educational model where social-emotional relationships acquire prominence and that are demanded by employers, therefore, the application of the diagnostic test upon admission to the University is recommended, to determine the need to implement academic monitoring programs for students who present low levels of EI and who are part of institutional programs such as that of tutorials and integral formation of the student.

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