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Motivation of Spanish University Students: A Regression Model

Lionel Sánchez-Bolívar [1], Juan Francisco Rodríguez-Gamal [2], Sergio Escalante-González [3,*] and María Isabel Tovar-Gálvez [4]

[1] Faculty of Humanities and Social Sciences, Isabel I University, 09003 Burgos, Spain; lionel.sanchez@ui1.es
[2] Faculty of Law, University of Granada, 51001 Ceuta, Spain; juanfrg@ugr.es
[3] Faculty of Philosophy and Letters, University of Granada, 51001 Ceuta, Spain
[4] Department of Nursing, Faculty of Health Sciences of Ceuta, University of Granada, 51001 Ceuta, Spain; matoga@ugr.es
* Correspondence: sergio.escalante@educeuta.es

Abstract: Student motivation is an axial variable in the choice of degree, academic performance, and future incorporation into the labor market. In this study, with a descriptive and cross-sectional design, 292 students enrolled in different university degrees of the University of Granada, in the campuses of Ceuta and Melilla; 66.80% (n = 195) women and 33.20% (n = 97) men, with a mean age of 22.03 years (SD = 5.80), were selected by stratified random sampling, in order to determine which type of motivation (extrinsic or intrinsic) was predominant and which population was more motivated. For data collection, a questionnaire was developed to assess students' motivation according to socio-demographic factors and social competence. The results revealed that students pursuing Educational degrees showed higher adherence than those studying Nursing or Business Administration and Management. The regression model proved to be valid, predicting 81.8% of cases and explaining between 0.201 and 0.309 of the dependent variable, showing that the most intrinsically motivated students were students of Educational Sciences with high social activity.

Keywords: learning; logistic regression; motivation; students; university; university students

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1. Introduction

The COVID-19 pandemic and the resulting confinement measures, along with subsequent health control strategies, have brought about a change in the teaching–learning process and student training. This change has been characterized by alterations in students' social skills and motivation, which have played a significant role in how students dealt with the situation.

Motivation is one of the key factors to consider when selecting a university degree and subsequent career paths. This psychological energy, which drives students to choose one option over another, will have a significant impact on their commitment, academic performance, and continuation in their field [1–3].

In this context, motivation is an ongoing process of feedback and interaction with other psychosocial factors, including emotional intelligence, social skills, and stress, and is critical for the development of various competencies that students must acquire during their training [4–8].

Social skills are essentially the ways in which individuals develop, act, communicate, and relate to others, and they are influenced by the specific contexts in which they are learned. Consequently, a deficiency in social skills can result in a sense of social inadequacy, which can lead to a lack of motivation and a cycle of decreased motivation and social inability [9–11].

Due to the current state of affairs, the development of skills involving direct human interaction has been impeded by the widespread implementation of preventative lockdowns and social distancing measures. This has led to a shift from primarily face-to-face

instruction to entirely virtual teaching, resulting in variations in students' motivational levels [12–18].

The decrease in motivation is closely linked to the rise in stress and anxiety levels, as well as the prevalence of generalized anxiety disorders, mental illness diagnoses, social phobia, and suicide attempts among university students [17,19–22].

The study of this psychological construct has become more significant in recent times, with an increase in research on a global scale, driven by the health crisis caused by COVID-19 and the extraordinary nature of the restrictive measures implemented, such as lockdowns and social distancing requirements [23,24].

Motivation has undergone significant changes in the general population, particularly among university students, due to the rapid declaration of confinements worldwide, uncertainty regarding access to university education, technological limitations, and preventive measures taken by health entities, all of which have impacted the academic environment [14,16,18,25–27].

According to Ryan and Deci, there are two theories of motivation, the Self-Determination Theory and the Organismic Integration Theory. Both theories start from the premise that human beings always have a minimum level of motivation, and that motivation is regulated based on the external or internal locus of the motivational stimulus. Therefore, these theories exclude the opposite concept of demotivation, and instead incorporate the concept of "amotivation" as the starting motivational level or a decrease in motivational level [2,4–6].

Two axioms stem from both theories: the first axiom is that an individual's motivation is self-determined and self-regulated, meaning that the individual themselves, through continuous situational assessments, modulates their motivational locus, internalizing it (intrinsic motivation) or externalizing it (extrinsic motivation) [5].

The second axiom establishes a modulating motivational flow through which the individual goes from a diffuse motivational level (amotivation) to external motivation and from external motivation to intrinsic motivation, or vice versa, from intrinsic motivation to extrinsic motivation, and even amotivation [6].

Extrinsic motivation originates when an external input drives the action, whereas intrinsic motivation originates internally and is triggered by the activity itself. It can be transformed from extrinsic to intrinsic through a process called internalization, where the action becomes self-determined and is performed for its own intrinsic value. Deci and Ryan's Self-Determination Theory describes intrinsic motivation as the result of satisfying the need for autonomy and competence, which generates a continuous flow of emotional satisfaction. Intrinsic motivation is distinguished by the enjoyment of both the process and the outcome of the activity, whereas pleasure is experienced only during the activity itself in the intrinsic process.

Intrinsic motivation is defined as any motivation in which the activating agent is psychological well-being produced by deciding to perform an action or carrying it out. Ryan and Deci [4] define intrinsic motivation as an inherently pleasurable or satisfactory feeling when carrying out a given action. Doing so in itself brings psychological pleasure to the person, reflecting the hedonistic nature of human beings [7].

In contrast, extrinsic motivation is characterized by the activating stimulus being external to the individual and action. Ryan and Deci state that extrinsic motivation is when the result of the action produces psychological well-being, not the action itself or having made the decision to carry it out. The regulation of this motivation is purely external [4–6,8].

This research was carried out with the aim of deepening and validating the predictability of the findings obtained in a previous study conducted by Sánchez-Bolívar et al. [9] in the same sample. A previous study investigated the relationship between motivation and the social skills of university students using a descriptive approach. Consequently, this study sought to establish a predictive model to identify the determinants of students' motivation and assess their ability to predict it, as well as to determine the percentage of variance that these factors can explain.

Within the daily activities in which motivation participates, culture will directly and indirectly affect the degree of motivation of the individual and the aspects that will serve as activators and inhibitors.

From the moment they are born, human beings find themselves within a certain culture that offers and provides them with certain social values and norms that establish the functioning of the society in which they find themselves, and what motivates them is determined by the culture, which can be a demotivating agent for a different culture [10].

Family, as the primary agent of socialization and culture, influences an individual's perception of what does and does not motivate them. Being within a culture is in itself a motivational activator, whereas exclusion from it is an inhibitor [10,11].

The predominant culture in a society will be able to affect the individual, so that in societies with cultural diversity, there will be a higher number of motivational triggers than in societies where there is only one culture or where one culture is dominant. In this sense, each culture establishes which social values are motivational triggers and which are not, so that not sharing them can be a cause of social exclusion [11,12].

The primary objective of this study is twofold: first, to describe the socio-demographic profile of students enrolled in undergraduate programs in cross-border contexts such as Ceuta and Melilla, which are part of the University of Granada, and second, to examine the relationship between these socio-demographic characteristics and student motivation. By employing a regression model, it is possible to evaluate the connection between student motivation and predictor variables, enabling the identification of the variables that have the greatest influence on motivation and how they impact motivation levels. This approach will contribute to enhancing consistency in research on this topic [13–15]. Considering the limited number of studies investigating the factors that shape university students' motivation and their effects on their academic and personal choices, this research aims to demonstrate the role of motivation in determining their degree selection and its influence on their professional, personal, and social competencies.

2. Materials and Methods

In this descriptive, exploratory, comparative, and cross-sectional study of a non-experimental and ex post facto nature, 292 students participated, enrolled in the degrees of Social Education, Early Childhood Education, Primary Education, Business Administration and Management, Labor Relations, Primary Education and Physical Activity and Sport Sciences, Physiotherapy, and Nursing at the Ceuta Campus and Melilla Campus of the University of Granada, with ages ranging between 18 and 54 years (M = 22.03; SD = 5.80), with male students representing 33.20% (n = 97) and female students representing 66.80% (n = 195).

To select the sample, the following selection criteria were used: (1) students must be enrolled in a university degree; (2) students must study at the Ceuta or Melilla campus, both of which belong to the University of Granada; and (3) students must be enrolled in studies leading to a university degree, excluding master's and doctoral students. The participants were selected using stratified random sampling with a master error of 0.05. This study's reporting followed the Strengthening the Reporting of Observational Studies in Epidemiology statement [16], as shown in the flow chart in Figure 1.

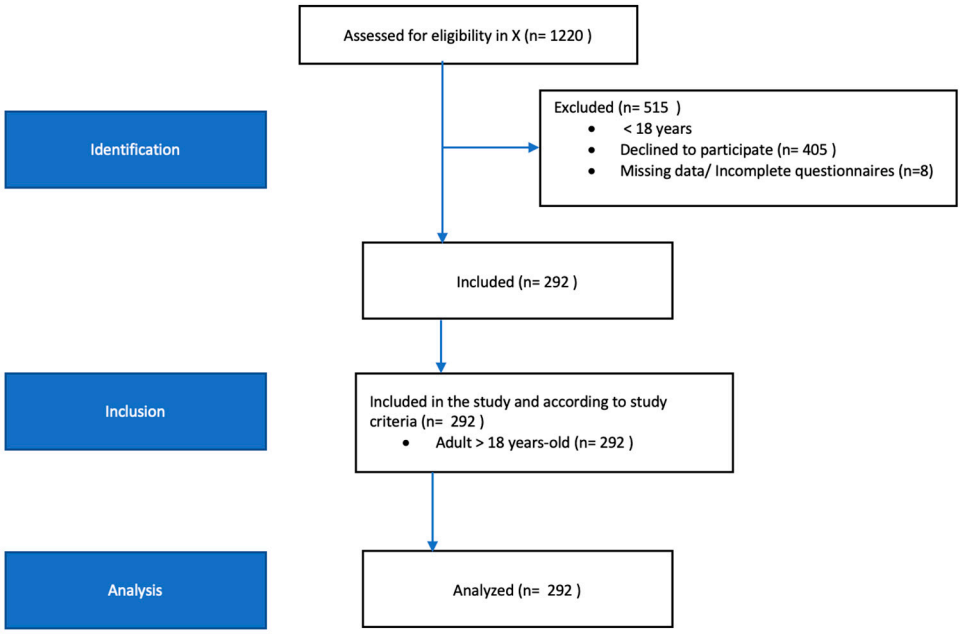

Figure 1. Strobe flowchart.

2.1. Variables and Instruments

To define socio-demographic variables and relate them to student motivation, a specific questionnaire was designed for this purpose, based on similar studies [2,14,17,18].

The variables defined in this study and the instruments used to measure them were age; gender; campus of study; religion; and degree.

Social skills were collected using an ad-hoc Likert-type scale from 1 to 10, with ten items referring to different social skills, distributed according to polarized categories: Introvert–Extrovert, Passive–Active, Reactive–Proactive, Asocial–Social, Reserved–Communicative, Pessimistic–Optimistic, Indifferent–Empathetic, Aggressive–Assertive, Submissive–Dominant, and Inflexible–Adaptive.

Binary categorization for the variables was employed to ensure that the students were unhesitant in their self-perceived social skills, placing themselves firmly within one social pole or the other. The social skills examined were related to person-to-person interaction, with the aim of assessing the underlying impact of COVID-19, given that confinement resulted in a lack of social contact.

In terms of categorization, the positive pole of social skills comprised extroversion, activity, proactivity, sociability, communicativeness, optimism, empathy, assertiveness, dominance, and adaptability. Conversely, the negative pole included introversion, passivity, asocial behavior, reservedness, pessimism, indifference, aggression, passivity, and inflexibility, which was established as described by Sánchez-Bolívar et al. [9].

For the measurement of motivation, under the dimension "reason for enrolment" (collected through an ad-hoc questionnaire with eleven options: (a) family expectation (extrinsic motivation), (b) preference (intrinsic motivation), (c) vocation (intrinsic motivation), (d) having a degree to work (extrinsic motivation), (e) personal satisfaction (intrinsic motivation), (f) opting for a better job category (extrinsic motivation), (g) being unemployed (extrinsic motivation), (h) improving CV (extrinsic motivation), (i) having more professional knowledge (intrinsic motivation), (j) lack of options (extrinsic motivation), and (k) other (extrinsic motivation)), each motive was graded according to its nature into extrinsic or intrinsic [9].

2.2. Procedure

The development of the data collection instrument was followed by communication with the relevant and coordinating teaching staff of each degree program of the Ceuta and Melilla campuses.

Subsequently, once access to the students was confirmed, an appropriate time and date were arranged during school hours and in groups for the administration of the questionnaire. To ensure confidentiality and anonymity, the researcher provided information to the students about the proper completion of the questionnaire and addressed any queries that they may have had.

It is important to emphasize that this study has adhered to the ethical standards outlined in the Declaration of Helsinki and has received approval from the Human Research Ethics Committee of the University of Granada, with reference number 2950/CEIH/2022.

2.3. Data Analysis

Data analysis was performed using IBM SPSS® 20.0 statistical software. Frequencies were used for basic descriptive data, while contingency tables were used for the comparative study. The significance of the relationships was established using Pearson's chi-squared test at $p \leq 0.05$.

The model on adherence to training and career guidance was conducted using binary logistic regression, with the purpose of establishing a predictive model of motivation in university students, using the Hosmer–Lemeshow test for goodness-of-fit and Pearson's chi-squared for the significance of relationships, set at $p \leq 0.05$. The Reliability Index (CI) for Exp (B) was set at 95%.

3. Results

A total of 292 university students enrolled at the University of Granada in the Ceuta and Melilla campuses participated in this study, as shown in Table 1. The mean age was 22.03 years (SD = 5.80). Of the total population, 66.80% (n = 195) were female and 33.20% (n = 97) were male; therefore, the population was mainly female. Of the total sample, 55.80% (n = 163) were students of "Christian/Catholic" confession, 25.70% (N = 75) were "Muslim" students, and 18.20% (n = 53) were "atheist" students.

Table 1. Basic descriptive.

		N	%			N	%
Gender	Woman	195	66.8	Qualification	Degree in Early Childhood Education	36	12.3
					Degree in Primary Education	41	14
	Man	97	33.2		Degree in Social Education	33	11.3
					Degree in Business Administration and Management	54	18.5
Religion	Christian/Catholic	163	55.8		Degree in Primary Education and Physical Activity and Sport Sciences	20	6.8
	Muslim	75	25.7		Degree in Nursing	101	34.6
	Hindu	1	0.3		Degree in Business Administration and Management and Law	6	2.1
	Atheist	53	18.2		Degree in Labor Relations and Human Resources	1	0.3
Campus	Ceuta Campus	229	78.4		Melilla Campus	63	21.6
Social Skills	Social Attitude						
	Introvert	97	33.2		Extrovert	195	66.8
	Social activity						
	Liabilities	64	21.9		Active	228	78.1

Table 1. *Cont.*

		N	%			N	%
Social Skills	Social Reaction						
	Reagent	92	31.5		Proactive	200	68.5
	Sociability						
	Asocial	40	13.7		Sociable	252	86.3
	Communicativeness						
	Reserved	81	27.7		Communicative	211	72.3
	Thinking						
	Pessimistic	101	34.6		Optimistic	191	65.4
	Empathy						
	Indifferent	32	11		Empathetic	260	89
	Emotional Reaction						
	Aggressive	71	24.3		Assertive	221	75.7
	Control						
	Submissive	101	34.6		Dominant	191	65.4
	Adaptability						
	Inflexible	27	9.2		Adaptive	265	90.8
Reason for registration	Family expectations		8	2.7	Opting for a better job category	15	5.1
	Preference		63	21.6	Enhancing the curriculum	4	1.4
	Vocation		145	49.7	To have more professional knowledge	7	2.4
	Have a qualification to work		10	3.4	Lack of options	24	8.2
	Personal satisfaction		13	4.5	Another	3	1

With regard to the degree, the "Nursing" student body, with 34.60% (n = 101), is the most numerous, followed by the "Business Administration and Management" student body, with 18.50% (n = 54) of the sample, and the "Labor Relations and Human Resources" student body and the double degree in "Business Administration and Management and Law" being the minority. As shown in Table 1, 78.40% (n = 229) of the sample came from the Ceuta campus, while the remaining 21.60% (n = 63) came from the Melilla campus.

In terms of the level of social skills, pupils perceive themselves as socially skillful. In this sense, it is noteworthy that 90.80% (n = 365) define themselves as "Adaptable", which implies having the ability to adapt to different situations in different contexts.

In relation to the motivation that prompted students to enroll in the degree they are studying, 49.70% (n = 145) stated that they did so because of "Vocation". This was followed by the option "Preference", with 21.60% (n = 63), which indicates that they enrolled because it was the most preferred degree after the desired one. It is important to point out that 8.20% (n = 24) marked as motivation the fact that they enrolled due to the "Lack of academic options" in Ceuta and Melilla.

Table 2 shows the results of Pearson's chi-squared test relating the variables to student motivation. As can be seen, there are statistically significant differences ($p < 0.05$) between the "Gender" and "Motivation" ($p = 0.043$) of the students. Females are more motivated than males. In this sense, 54.45% (n = 159) of females were more intrinsically motivated than males (23.63%, n = 69).

Table 2. Student motivation by gender, religion, qualifications, and social skills.

Gender						
		Woman		Man		*p*
Motivation	EM	36 (12.33%)		28 (9.59%)		0.043
	IM	159 (54.45%)		69 (23.63%)		
Religion						
		Christian/Cat.	Muslim	Hindu	Other	*p*
Motivation	EM	28 (9.59%)	24 (8.22%)	1 (0.34%)	11 (3.77%)	0.017
	IM	135 (46.23%)	51 (17.47%)	0	42 (14.38%)	
Campus						
		Ceuta Campus		Melilla Campus		*p*
Motivation	EM	56 (19.18%)		8 (2.74%)		0.046
	IM	173 (59.25%)		55 (18.84%)		
Qualification						
		Degree in Early Childhood Education	Degree in Primary Education	Degree in Social Education	Degree in Business Administration	*p*
Motivation	EM	9 (3.08%)	13 (4.45%)	11 (3.77%)	21 (7.19%)	≤0.001
	IM	27 (9.25%)	28 (9.59%)	22 (7.53%)	33 (11.30%)	
		Degree in Primary Education, Physical Activity and Sport Science.	Degree in Nursing	Degree in Business Administration and Law	Degree in Labor Relation and Human Resources	*p*
Motivation	EM	1 (0.34%)	5 (1.71%)	4 (1.37%)	0	≤0.001
	IM	19 (6.51%)	96 (32.88%)	2 (0.68%)	1 (0.34%)	
Social Skills						
Social Attitude		Introvert		Extrovert		*p*
Motivation	EM	25 (8.56%)		39 (13.36%)		0.261
	IM	72 (24.66%)		156 (53.42%)		
Social activity		Liabilities		Active		*p*
Motivation	EM	25 (8.56%)		39 (13.36%)		≤0.001
	IM	39 (13.36%)		189 (64.73%)		
Social Reaction		Reagent		Proactive		*p*
Motivation	EM	23 (7.88%)		41 (14.04%)		0.388
	IM	69 (23.63%)		159 (54.45%)		
Sociability		Asocial		Sociable		*p*
Motivation	EM	18 (6.16%)		46 (15.75%)		≤0.001
	IM	22 (7.53%)		206 (70.55%)		
Communicativeness		Reserved		Communicative		*p*
Motivation	EM	26 (8.90%)		38 (13.01%)		0.009
	IM	55 (18.84%)		173 (59.25%)		

Table 2. *Cont.*

Social Skills				
Thinking		Pessimistic	Optimistic	*p*
Motivation	EM	29 (9.93%)	35 (11.99%)	0.041
	IM	72 (24.66%)	156 (53.42%)	
Empathy		Indifferent	Empathetic	*p*
Motivation	EM	17 (5.82%)	47 (16.10%)	≤0.001
	IM	15 (5.14%)	213 (72.95%)	
Emotional Reaction		Aggressive	Assertive	*p*
Motivation	EM	24 (8.22%)	40 (13.70%)	0.005
	IM	47 (16.10%)	181 (61.99%)	
Control		Submissive	Dominant	*p*
Motivation	EM	25 (8.56%)	39 (13.36%)	0.395
	IM	76 (26.03%)	152 (52.05%)	
Adaptability		Inflexible	Adaptive	*p*
Motivation	EM	12 (4.11%)	52 (17.81%)	0.003
	IM	15 (5.14%)	213 (72.95%)	

Note: EM: Extrinsic Motivation; IM: Intrinsic Motivation.

On the other hand, statistically significant differences ($p < 0.05$) were identified between the students' "Motivation" and "Religion" ($p = 0.017$). The most motivated students belonged to the Christian/Catholic religion group. In relation to this, representing 46.23% (N = 135) of the total, Christian/Catholic students were more intrinsically motivated.

Similarly, statistically significant differences ($p < 0.05$) were found between students' "motivation" and "campus" ($p = 0.046$), where the majority of the population was intrinsically more motivated. Likewise, there are statistically significant differences ($p < 0.05$) between students' "motivation" and "qualification" ($p \leq 0.001$). Among "Nursing" students, 32.88% (N = 96) stand out with higher values of "intrinsic motivation". It is noteworthy that 11.30% (n = 33) of students studying a "Degree in Business Administration and Management" are intrinsically motivated and 7.19% (n = 21) are extrinsically motivated.

Regarding the relationship between the "Social Skills" and "Motivation" of students, statistically significant differences ($p < 0.05$) were identified between "Motivation" and "Social Activity" ($p \leq 0.001$), where active students are more motivated both intrinsically and extrinsically than passive students; "Sociability" ($p \leq 0.001$), where the same happens as in the previous dimension; "Communicativeness" ($p = 0.009$); "Thinking" ($p = 0.041$); "Empathy" ($p \leq 0.001$); "Emotional Reaction" ($p = 0.005$); and "Adaptability" ($p = 0.003$), so there is a relevant relationship between the motivation and social skills of students.

Table 3 shows the binary logistic regression model used to determine the predominant profile of subjects who tend to be intrinsically motivated.

Firstly, it can be established that the model helps explain the profile of the person who is intrinsically motivated, since the significance of the chi-squared in the omnibus test obtained a value of $p < 0.001$. Likewise, it is able to predict correctly in 81.8% of cases and explains between 0.201 and 0.309 of the dependent variable, so the model is quite acceptable.

The relationship of the independent and dependent variables (Table 3) obtained statistically significant differences for the associations with "Qualification" ($p \leq 0.001$) and social activity ($p = 0.027$), revealing a strong and positive relationship with "Qualification" (B = 2.360) and "Social activity" (B = 0.940), while the remaining variables are not relevant in terms of student motivation.

Table 3. Binary logistic regression model for motivation in university students.

	B	E.T.	Wald	gl	*p*	Exp(B)	C.I. 95% for EXP(B)	
							Inferior	Top
Gender	−0.457	0.350	1.704	1	0.192	0.633	0.318	1.258
Religion	0.501	0.466	1.158	1	0.282	1.651	0.662	4.114
Campus	0.605	0.493	1.506	1	0.220	1.830	0.697	4.806
Qualification	2.360	0.558	17.865	1	≤0.001	10.596	3.546	31.660
Social Attitude	−0.311	0.397	0.614	1	0.433	0.733	0.337	1.595
Social Activity	0.940	0.425	4.890	1	0.027	2.559	1.113	5.885
Social Reaction	−0.427	0.391	1.192	1	0.275	0.652	0.303	1.405
Sociability	0.633	0.553	1.309	1	0.253	1.883	0.637	5.570
Communicativeness	0.021	0.454	0.002	1	0.963	1.021	0.419	2.488
Thinking	0.430	0.373	1.330	1	0.249	1.537	0.740	3.189
Empathy	0.921	0.512	3.235	1	0.072	2.512	0.921	6.854
Emotional Reaction	0.430	0.390	1.216	1	0.270	1.538	0.716	3.303
Control	0.189	0.365	0.269	1	0.604	1.208	0.591	2.471
Adaptability	0.180	0.534	0.114	1	0.736	1.197	0.420	3.409

Note: B = binomial coefficient; Exp (B) = estimated likelihood ratio; Wald = Wald Z-statistic; gl = degrees of freedom, *p* = significance; CI for Exp (B) = confidence interval for exp(B); ET = standard error for B.

In this sense, and as can be seen in Table 3, being a student of "Health Sciences" multiplies being intrinsically motivated by 10.60 times. Similarly, being socially active multiplies the possibility of being extrinsically motivated by 2.56 times. Health Science students are most motivated because they are socially active. In other words, being a socially active Health Sciences student increased motivation almost 13 times more than other students.

4. Discussion

This study aimed to analyze, relate, and deepen the profile of university students in the cross-border cities of Ceuta and Melilla, whose university campuses are part of the University of Granada.

To accomplish this, a regression analysis was conducted to determine which students possessed greater intrinsic motivation and to identify the social skills that contribute to enhancing it. For this research, a specially designed socio-demographic questionnaire was employed to obtain a predominantly female sample of university degree candidates.

It is important to acknowledge that the degrees that are most prevalent in the sample are those that are typically associated with the female gender or have a female student population, and it is observed that the female population displays higher levels of motivation compared to their male counterparts. Hence, gender plays a significant role in regulating student motivation [19–22].

However, in samples of students in sport disciplines, where gender choices are similar, that is, equal numbers of males and females are reached, males have higher motivation rates than females [23,24].

On the other hand, it can be concluded that culture and religion act as a regulator of students' motivation and social skills, with Christians standing out in motivation and social skills compared with Muslims or atheists. This is because each culture or religion establishes which emotional and motivational triggers are socially accepted and which are discarded or not allowed [25–28].

In terms of social skills, all socially skilled students have higher levels of intrinsic motivation, whereas students with deficits in some social skills experience more extrinsic motivation and lower motivational levels [29–32].

The regression results show that students who are socially active and vocationally study a Health Sciences degree are more intrinsically motivated than students from other degrees and who have a lower level of social development. In this sense, students' passive attitude acts as an inhibitor of motivation [30,31,33,34].

It should be borne in mind that the motivation of students in Health Sciences, such as Nursing, Physiotherapy, Occupational Therapy, etc., coincides with the vocational nature of these professions, as well as the need to have developed social and emotional competences at a professional level [35–41].

In this sense, motivation in Health Science students acts as a regulator of other psychosocial variables such as stress. A high level of intrinsic motivation reduces levels of distress, or negative stress, and is related to an increase in positive stress, or eustress [42–44]. Therefore, intrinsic motivation acts as a coping strategy in stressful situations, helping to maintain consistent performance and considerable academic achievement [45–47].

Similarly, intrinsic motivation is related to better emotional control; therefore, it has a significant positive relationship with emotional intelligence and emotional regulation in Healthcare students, preventing burnout, to which both trainees and professionals in this area are continually exposed [48–50].

The other variable that establishes the motivational profile of university students is social activity, understood as students' predisposition to relate to other individuals in their environment. Being socially active is related to a better self-concept and higher self-esteem, while being socially passive limits social relationships and alienates students' motivation, causes them to interpret social interaction as futile, and reduces their levels of social skills [26,27,51,52].

Health Science students with high levels of social activity are the most intrinsically motivated. This will benefit their future professional work and the care they will provide to people, while simultaneously preventing stressful situations for themselves and preventing the burnout that characterizes these professions [49,53–56].

Considering the aforementioned factors, namely, the variables that serve as predictors of students' intrinsic motivation, contributes to the enhancement of academic performance and attainment, as well as to the prevention of negative emotions and/or aversion towards the degree program, fostering favorable attitudes and sentiments towards it and the profession it focuses on [57,58]. The differentiation between intrinsic and extrinsic motivation in the study of human motivation provides a conceptual basis for understanding different behavioral determinants. It identifies the factors that influence people's motivation and explores how they may evolve over time through processes such as internalization. This is fundamental to guiding intervention strategies and promoting autonomy and commitment to achieve objectives [59,60].

A regression model can offer greater precision in examining the connection between university motivations and various elements that may impact it. Using a regression model, the relationship between student motivation and predictor variables can be evaluated by determining which variables have the most significant influence on motivation and how they affect motivation. Moreover, regression models can assist researchers in identifying patterns and trends in data, which can provide a more profound understanding of the factors that affect student motivation [61–64].

A theoretical approach founded on self-determined motivation has been selected because it presents a motivational contribution that focuses on the individual, incorporating both intrinsic and extrinsic motivation as the two extreme ends of human motivation. This approach dismisses demotivation, which is characterized as the absence of motivation, and encompasses amotivation, which is defined as the feeling of motivational alienation that arises when an individual feels that their actions lack the expected outcome. Other theories currently in use, such as those based on motivational climate, offer an excessive extrinsic perspective to motivational analysis, so that, taking behaviorist theories as a theoretical source, an increase in motivation is attributed to external factors such as rewards, results, the attitude of the motivating person, etc. [65].

Finally, it should be noted that this research has provided a pattern of motivation, defining which students are more motivated and at what level they are more motivated than others. This allows us to analyze the educational practices that are being carried out and to apply them to less-motivated students in the rest of the degrees. This research

also serves as a basis for establishing specific intervention programs to prevent students from dropping out and to increase their motivation and commitment to their training and future professions.

This regression model presents consistent data on the motivational behavior of Spanish students in Ceuta and Melilla. However, applying multilevel modeling would provide further strength to the analysis. With the aim of finding out more about the nature of student motivation, this model will be considered in future research.

5. Conclusions

This quantitative regression analysis of motivation among university students has revealed, on the one hand, that the university student population has a medium–high level of intrinsic motivation, primarily connected to the vocational nature of the degree.

On the other hand, being a student in the field of Health Sciences increases intrinsic motivation by ten times compared to the rest of students, and having developed social interaction skills boosts intrinsic motivation by more than two times.

This research has emphasized the significance of motivation and social skills in degrees and professions that are exposed to constant negative stress or distress, as well as their role as a crucial variable in the prevention of burnout.

Connected to the above, the primary line of research stemming from this work is the relationship between this variable and others such as stress, emotional intelligence, self-esteem, and self-concept, as well as the evaluation of this relationship after coaching or mindfulness intervention programs.

The main limitation of this study was the small range of courses offered on the campuses analyzed, where mainly women were enrolled. Therefore, it would be interesting to extend the sample and conduct a comparative study with the Granada campus, where the range of university courses on offer is more extensive and diverse.

A regression model can provide a more precise and detailed assessment of the relationship between university students' motivation and the various influencing factors.

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