

# Happiness in university students

La felicidad en los estudiantes universitarios  
Felicidade nos estudantes universitários



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## Resumen

Happiness, as understood as the degree of positive meaning assigned to life, satisfaction with life, the degree of personal fulfillment and the joy of living was studied in a university students' sample. A non-experimental cross-sectional work was made with a sample of 229 participants from different academic careers with ages of 18-57 years. The results obtained showed correlations between the academic careers with the Positive sense of life, Satisfaction with life and Joy of living. In addition, differences were found when considering the sex of the participants, academic careers, father's work occupations and mother's work occupations. The influence that each factor has separately on the happiness of the students is analyzed to conclude with the discussion about the importance that other studies have found out about the influence of social interactions in the maintenance of happiness, and how these results could support the findings of our work.

## Abstract

La felicidad, entendida como el grado de sentido positivo atribuido a la vida, la satisfacción con la vida, el grado de realización personal y la alegría de vivir, se estudió en una muestra de estudiantes universitarios. Se realizó un trabajo no experimental de corte transversal con una muestra de 229 participantes de diferentes carreras académicas con edades entre 18 y 57 años. Los resultados obtenidos mostraron correlaciones entre las carreras académicas con el Sentido Positivo de la Vida, Satisfacción con la Vida y Alegría de Vivir. Además, se encontraron diferencias al considerar el género de los participantes, trayectoria académica, ocupación del padre y de la madre. Se analiza la influencia que tiene cada factor por separado en la felicidad de los estudiantes para concluir con una discusión sobre la importancia que otros estudios han encontrado sobre la influencia de las interacciones sociales en el mantenimiento de la felicidad, y cómo estos resultados pueden apoyar los hallazgos de nuestro trabajo.

## Resumo

A felicidade, entendida como o grau de significado positivo atribuído à vida, a satisfação com a vida, o grau de realização pessoal e a alegria de viver foi estudada em uma amostra de estudantes universitários. Foi realizado um trabalho transversal não experimental com uma amostra de 229 participantes de diferentes carreiras acadêmicas com idades compreendidas entre os 18 e os 57 anos. Os resultados obtidos mostraram correlações entre as carreiras acadêmicas com o Sentido Positivo da Vida, Satisfação com a Vida e Alegria de Viver. Além disso, foram encontradas diferenças ao considerar o sexo dos participantes, carreira acadêmica, ocupação do pai e da mãe. A influência que cada fator tem separadamente na felicidade dos alunos é analisada para concluir com a discussão sobre a importância que outros estudos descobriram sobre a influência das interações sociais na manutenção da felicidade, e como esses resultados podem apoiar os achados de nosso trabalho.

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## Antecedents

Since ancient times, thinkers, philosophers, poets, and scientists have tried to analyze and postulate various principles about the happiness or well-being of human beings, thus constituting a very important study topic in the field of psychology today. In this way, positive psychology can be considered as a starting point for studying happiness, not in defining psychopathologies or negative “symptoms” in terms of deficits, but in the sense of promoting aspects that increase human development, which is very in line with the study of happiness **(Contreras & Esguerra, 2006; Park, Peterson & Sun, 2013)**.

Happiness, as understood as subjective well-being, plays an important role with respect to the quality of life of individuals, and entails giving meaning to one’s life and existence, all reasons which have granted a growing interest in recent years in academic and research spaces **(Martín, 2017; Diaz, 2001)**. Despite its enormous importance, the literature on the subject is still minimal **(Guzmán & Santa Cruz, 2016)**. Happiness is recognized as an aspiration that individuals have, because it is so closely related to high levels of well-being, therefore making happiness an important emotion. In order to define it, it is important to consider important factors such as one’s individual lived experienced, the resources available to the individual, as well as emotion regulation tools and determining the role that self-efficacy plays **(Sánchez & Mendez, 2011)**.

People's desirability for happiness as a positive feeling is a self-determined attribute that comes from social construct (Mercado, 2014). This construct varies according to the place, the environment of the person, and culture. Each individual can have their own definition of it and from this consider themselves happy or not. The particular experiences of each person as well as what is seen or perceived as something that produced happiness are of great importance in the perception of each subject regarding their levels of happiness in the culture of each subject, which can be influenced by various factors ranging from economic, social, and emotional. One of the fundamental components of well-being is personal satisfaction with life. This satisfaction arises from interactions between the individual and their micro and macro-social environment, along with current and past events within the context, which include objective and social conditions which provide the individual with certain opportunities for personal fulfillment. The term "well-being" implies personal experience and maintains an intimate relationship between affective and cognitive processes. Most authors define well-being as the subjective assessment that expresses one's satisfaction and their degree of satisfaction, within specific or broad aspects of their life, where positive mood tend to predominate (García-Viniegras & González, 2000).

There has been a lot of debate in regards to specific terminology referring to subjective well-being. It is important to mention that happiness is a part of our general health in its most general sense as it manifests itself all areas of human activity. This is to such degree that Carretero (2017) argued that the imaginary construct of happiness has been expanded beyond economic limitations to include in its conception effects, practices, and utilities considered as "post-materialist" values. These post-materialist values arise due to what Ojeda-García (2011) argues as a discrepancy between the degree of happiness reported by people and the material possessions in their names. Instead of seeking happiness externally, individuals now seek an optimal experience of the moment. Furthermore, the negative effect that utilitarian conception of consumerism can have and influence on people's well-being and happiness (Aparicio, 2011; Cuadra & Florenzano, 2013). Diener (2013) simplifies these theoretical conceptions into three categories: the first describes well-being as the individual's valuation of his own life in positive terms as is related to life satisfaction; the second category is about defining the preponderance of positive feelings over negative ones, due to overarching judgements that people attribute to their feelings; finally, the third classification is related to philosophical, religious thoughts looks at happiness as a virtue or a state of grace, considering happiness as normative for the arrival to a desirable state, for which one must work for.

It is also interesting to consider the difference between men and women regarding happiness and well-being. Sanchez and Mendez (2011) found that men find happiness in the satisfaction of basic needs, while women find it in events such as talking with friends or meeting people they have not seen for a long time. In terms of investigating happiness in adolescents, it has been found that during adolescence the "aspiration for happiness" could be conceived as a distant and little differentiated aspect, however, it can be possible to conceive it through reframing the activities carried out in daily life, where intimate and personal experiences promoted help consulate happiness (Nava-Preciado y Ureña-Pajarito, 2017). Several studies have been carried out regarding what impacts happiness in university students, in which emotional fatigue, low self-esteem, and little satisfaction with studies seem to have a negative impact on their well-being (Ortiz, Gancedo y Reyna, 2013; Lledó, Perandones, Herrera y Lorenzo, 2014). Other authors have also argued that aspects such as emotional exhaustion and psychological well-being can, in fact, affects people's overall health status (Vázquez, Hervás, Rahona y Gómez, 2009).

On the other hand, the research surrounding happiness in adults has shown that happiness can be related to social bonding and interacting. In their study, Puig et al. (2011) found that happiness was associated with their children, the health of the family, and their adaptation to troubling circumstances.

Considering that studying happiness can serve as a path towards understanding conformation in quality of life, the objective of this study is to understand the degree of happiness in university students, what aspects influence their happiness, and whether there are differences amongst students from different departments or colleges (Barragán, 2013).

## Method

### Population and Sample

A sample composed of ( $N=229$ ) university students was used: ( $N=135$ ) men, 59% and ( $N=94$ ) women, 49%. All were students at the National Autonomous University of Zacatecas, ranging from different academic departments such as anthropology ( $N=36$ ), philosophy and Literature ( $n=41$ ), Philosophy ( $n=22$ ), Civil Engineering ( $N=38$ ), Mechanical Mngineering ( $N=40$ ), and Biology ( $N=52$ ), with ages ranging from 18-57 with a range of age.

### Design

A non-experimental cross-sectional research design was used because there was no manipulation of the variables studied and the information was collected only once.

### Instruments used in data collection

Was used Alarcon's (2006) happiness scale, which has been validated for use in Mexican populations, and has a Cronbach coefficient of .917 (Toribio, González, Valdez, González y Van Barneveld, 2012). The scale is composed of 27 items, divided into four categories: the first, "positive sense of life" ( $\alpha = .873$ ), which incorporates a low presence of depressive mood meanwhile having positive feelings towards oneself and one's life; the second, "satisfaction with life" ( $\alpha = .797$ ), which is the level of perception where a person thinks they have reached their goals and is close to reaching their ideal life; the third is "personal fulfillment" ( $\alpha = .710$ ), which includes skills for self-sufficiency, autarky, emotional tranquility, and conditions for achieving a state of complete happiness. Finally, the fourth category is named "joy of living" ( $\alpha = .822$ ), refers to positive life experiences and feelings of well-being. The scale presents Likert-type response options from 1 to 5, where 1=totally disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree.

### Data Analysis

For data analysis, was used a Kolmogorov-Smirnov test to verify the assumptions of normality. Because the significance was  $p = <.05$ , it was decided to carry out the sampling simulation procedure

(Bootstrapping) to compare the results obtained by this procedure and the results obtained from student parametric t-test, ANOVA, and linear regression, showing comparison of the confidence intervals between the tradition method and the Bootstrap method by simulating **2,000** random samples. Sampling simulation has been considered a good strategy for analyzing data with a non-normal distribution to carry out descriptive or inferential statistics (Wright, London, & Field, 2011; Thompson, 2014). For this, the data distribution is determined by simulating a high number of random samples built on the collected data, this number of samples being an mean of **2,000** random samples, achieving good estimates of the sample means, as well as error rates in linear discrimination problems (Gil, 2005; Ledesma, 2008; Efron, 1979). Lastly, it was carried out various simple linear regression models taking as independent variable each factor of the happiness scale to know which factor made a stronger influence on the dependent variable (Total scale score). To determine the best regression model, it was considered the Aikake Information Criterion (AIC) and Bayesian Information Criterion (BIC) which postulate that the model with the lowest values were the best fit-model (Huang, 2017). The AIC and BIC were calculated on RStudio Desktop **1.3.1093**

## Ethical considerations

In considering the most objective trajectory possible, article **60** of the Code of Ethics for Psychologist (2013) was considered, which establishes that psychologists refrain from withdrawing conclusions that are not derived directly, objectively, and clearly from the results obtained. In addition, based on article **138**, participants will be informed about the foreseeable academic uses of the information generated by their participation. Likewise, based on the code of ethical conduct of the American Psychological Association (2017), the participants will

Table 1 Descriptive Statistics

	N	ean	M	S.D.	ariance	V		
Total Score	29	2	2.3712	8	92	7.007	9.112	4
Positive sense of life	29	2	9.8384	1	94	7.555	7.092	5
Satisfaction with life	29	2	2.3406	2	15	4.112	6.910	1
Personal Fulfillment	29	2	0.7642	2	56	3.926	5.418	1
Joy of living	29	2	9.4279	1	30	3.732	3.930	1

Source: Self-reported data

Then indicate descriptive statistics grouped by sex and by academic department of study (Table 2 and Table 3). We can observe that women scored higher in the factor of positive sense of life and personal

Table 2 Scores grouped by sex

	Men n = 135			Women n = 94			p-value
	Mean	Variance	S.D.	Mean	Variance	S.D.	
Positive sense of life	19.80	63.90	7.99	19.88	47.88	6.92	.236
Satisfaction with life	22.69	16.73	4.09	21.82	16.89	4.11	.941
Personal fulfillment	20.65	13.58	3.68	20.92	18.17	4.26	.932
Joy of living	19.67	15.28	3.90	19.07	11.91	3.45	.605
Total Score	82.82	45.48	6.74	81.71	54.12	7.35	.233

be informed about the objective of the research, the duration of the application of instruments and the related procedures, their right not to participate or abandon the application at the time they consider it appropriate, and who to contact in case of doubts while answering these instruments.

On the other hand, based on the Declaration of Helsinki prepared by the World Medical Association (2013) for research on human beings, voluntary participation in this research is considered, ruling out any individual who is not able to freely give consent. In this sense, any questions that the participants have regarding the objectives, methods used, financing, institutional affiliation, conflicts of interest and possible benefits or risks that may be presented during the investigation will be answered and disclosed.

Finally, adhering to the regulation of the general health law on research for health (2014), respect for the dignity and protection of the rights and well-being of the participants, as well as the protection of the privacy of their results, will be maintained, and the exclusion of this results is possible, if required, in keeping to the scientific and ethical principles of the research.

## Results

### Descriptive Statistics

Below are the means obtained in the total score, as well as in the four dimensions of the scale without *Bootstrap* (table 1)

fulfillment, while men scored higher in overall total scores, satisfaction with life, and joy of living. However, these differences were not statistically significant neither by sex nor by academic departments.

Table 3 Scores grouped by academic department

	n		Total score	Positive sense of life	Satisfaction with life	Personal fulfillment	Joy of living
anthropology	36	Mean	83.08	18.38	23.19	21.72	19.77
		Variance	46.13	65.61	15.99	19.06	11.66
		S.D.	6.79	8.1	3.99	4.36	3.41
Literature	41	Mean	81	24.41	20.34	19.36	16.87
		Variance	53.7	49.19	17.48	14.23	15.21
		S.D.	7.32	7.01	4.18	3.77	3.89
Philosophy	22	Mean	80.5	23.4	20.18	18.95	17.95
		Variance	56.26	57.11	13.68	14.04	9.09
		S.D.	7.5	7.55	3.69	3.74	3.01
Civil engineering	38	Mean	81.42	17.63	22.97	20.76	20.05
		Variance	51.16	45.37	14.45	15.32	11.56
		S.D.	7.15	6.73	3.8	3.91	3.4
Mechanical engineering	40	Mean	84.4	16.92	24.45	21.85	21.17
		Variance	35.11	40.48	10.4	7.46	8.3
		S.D.	5.92	6.36	3.22	2.73	2.88
Biology	52	Mean	82.88	19.57	22.15	21.13	20.01
		Variance	51.08	50.05	17.27	17.37	14.56
		S.D.	7.14	7.07	4.15	4.16	3.81
Total	229	Mean	82.37	19.83	22.34	20.76	19.42
		Variance	49.11	57.09	16.91	15.41	13.93
		S.D.	7	7.55	4.11	3.92	3.73

Source: self-reported data

## Correlations

In executing Bootstrap Pearson correlation tests, the results show high correlations (>.5) were obtained in all the factors, except in the “joy of

living” scores. Confidence intervals, narrow demonstrate the precision of these test results. Then, we consider that the correlations between Total Score, Positive Sense of Life, Satisfaction with Life, Personal Fulfillment, and Joy of Living to be accurate because the range of the IC Bootstrap is minimal.

Table 4 Pearson Correlations

		Total Score	Positive sense of life	Satisfaction with life	Personal fulfillment	Joy of living	Age	Monthly income
Total Score	Coefficient	1						
	IC Bootstrap	1						
Positive sense of life	Coefficient	-0.001	1					
	IC Bootstrap	-.12;.12	1					
Satisfaction with life	Coefficient	.62**	.68**	1				
	IC Bootstrap	.53;.70	.61;.74	1				
Personal fulfillment	Coefficient	.64**	.59**	.81**	1			
	IC Bootstrap	.56;.72	.51;.65	.77;.84	1			
Joy of living	Coefficient	.52**	.67**	.65**	.58**	1		
	IC Bootstrap	.41;.62	.59;.74	.49;.67	.49;.67	1		
Age	Coefficient	-0.007	0	-0.01	0.02	-0.01	1	
	IC Bootstrap	-.11;.10	-.12;.09	-.15;.11	-.10;.11	-.09;.06	1	
Monthly income	Coefficient	-0.01	-0.01	-0.04	-0.07	0.07	0.78	1
	IC Bootstrap	-.12;.10	-.15;.11	-.16;.06	-.18;.04	-.05;.20	-.06;.20	1

\*\* Correlation is significant at 0,01 (bilateral).

## Student's t-test

No significant correlations ( $p = < .05$ ) were found with sociodemographic variables such as age and monthly income.

In terms of differences between sex, significant findings were found only in two specific question items (Table 5).

Table 5 Student's t-test between sex

	sex	Mean	S.D.	Difference of means	IC 95% Traditional method		IC 95% Bootstrap method		p-value
					Inferior	Superior	Inferior	Superior	
1. – In most aspects, my life is close to ideal	Male	3.59	.766	.252	.033	.471	.033	.471	.024
	Female	3.34	.911						
5. – Life has been good to me	Male	3.79	.973	.275	.1	.539	.1	.539	.042
	Female	3.51	1.034						

Can see that men perceived that their life is closer to what they consider “ideal”, as well as a more positive assessment of the life they have lived.

## ANOVA Tests

In the analysis of the variance, we only found significant difference when considering variables such as the academic unit (table 6), the father's

occupation (table 7) and the mother's work occupation (table 8). In this sense, we observed that students in the Literature department perceive a positive meaning in life to a greater extent than others, and that mechanical engineering students to a lesser extent. However, it is the latter who are most satisfied with their life, while students in the Philosophy department obtained the least satisfaction with their life and in personal fulfillment. Finally, students in Mechanical Engineering scored higher in joy of living, with Literature students scoring the lowest.

Table 6 ANOVA test by academic department

		Mean	S.D.	IC 95% Traditional method		IC 95% Bootstrap method		p-value
				Inferior	Superior	Inferior	Superior	
Positive sense of life	Anthropology	18.38	8.1	15.64	21.12	15.94	21.03	< .0001
	Literature	24.41	7.01	22.2	26.62	22.37	26.48	
	Philosophy	23.4	7.55	20.05	26.75	20.34	26.58	
	Civil Engineering	17.63	6.73	15.41	19.84	15.62	19.85	
	Mechanical Engineering	16.92	6.36	14.89	18.95	15	18.93	
	Biology	19.57	7.07	17.6	21.54	17.69	21.52	
Satisfaction with life	Anthropology	23.19	3.99	21.84	24.54	21.94	24.45	< .0001
	Literature	20.34	4.18	19.02	21.66	19.08	21.61	
	Philosophy	20.18	3.69	18.54	21.82	18.47	21.63	
	Civil Engineering	22.97	3.8	21.72	24.22	21.78	24.17	
	Mechanical Engineering	24.45	3.22	23.41	25.48	23.43	25.47	
	Biology	22.15	4.15	20.99	23.31	20.97	23.29	
Personal Fulfillment	Anthropology	21.72	4.36	20.24	23.19	20.3	23.1	0.007
	Literature	19.36	3.77	18.17	20.55	18.25	20.55	
	Philosophy	18.95	3.74	17.29	20.61	17.39	20.52	
	Civil Engineering	20.76	3.91	19.47	22.04	19.52	22.02	
	Mechanical Engineering	21.85	2.73	20.97	22.72	21	22.72	
	Biology	21.13	4.16	19.97	22.29	19.96	22.21	
Joy of living	Anthropology	19.77	3.41	18.62	20.93	18.6	20.84	< .0001
	Literature	16.87	3.89	15.64	18.1	15.67	18.05	
	Philosophy	17.95	3.01	16.61	19.29	16.66	19.27	
	Civil Engineering	20.05	3.4	18.93	21.17	18.9	21.15	
	Mechanical Engineering	21.17	2.88	20.25	22.09	20.3	22.06	
	Biology	20.01	3.81	18.95	21.08	18.97	21.03	

Table 7 ANOVA test by father's occupation

		N	Mean	S.D.	IC 95%		IC 95% Bootstrap		p - value
					Inferior	Superior	Inferior	Superior	
"I think I will never be happy"	Farmer	23	1.70	1.1	1.22	2.17	1.28	2.16	.034
	Retired	9	2.33	.866	1.67	3.00	1.75	3	
	Employee	53	1.87	1.09	1.57	2.17	1.59	2.17	
	Teacher	28	1.43	.690	1.16	1.70	1.18	1.17	
	Worker	14	1.29	.469	1.02	1.56	.435	.86	
	Professional	30	1.6	.894	1.27	1.93	.267	.527	
	Not Reported	28	2.07	1.08	1.65	2.49	1.31	1.96	
	Public Servant	7	1.14	.378	.79	1.49	.734	1.35	
	Merchant	29	1.55	1.05	1.15	1.95	.000	.577	
	Entrepreneur	6	1.17	.408	.74	1.60	.561	1.328	
Migrant	2	2.00	1.41	-10.71	14.71	.000	.577		
"My life passes peacefully"	Farmer	23	3.22	1.08	2.75	3.69	.000	1.41	.018
	Retired	9	3.22	.441	2.88	3.56	2.77	3.65	
	Employee	53	3.45	.798	3.23	3.67	.000	.548	
	Teacher	28	4.11	.629	3.86	4.35	.618	.964	
	Worker	14	3.71	.469	3.44	3.98	.441	.765	
	Professional	30	3.47	.973	3.10	3.83	.258	.527	
	Not Reported	28	3.29	1.01	2.89	3.68	3.12	3.83	
	Public Servant	7	3.43	1.27	2.25	4.61	2.89	3.67	
	Merchant	29	3.31	1.03	2.92	3.71	2.33	4.25	
	Entrepreneur	6	4.00	.632	3.34	4.66	2.90	3.67	
Migrant	2	3.50	.707	-2.85	9.85	.000	.957		

Lastly, students who have mothers who work as merchants report higher life satisfaction, and children of entrepreneur mothers report the lowest scores.

Table 8 ANOVA test by mother's occupation

	N	Mean	S.D.	IC 95%		IC 95% Bootstrap		p-value
				Inferior	Superior	Inferior	Superior	
Merchant	19	4.00	1.054	3.49	4.51	3.50	4.44	.029
Retired	8	3.75	1.282	2.68	4.82	2.70	4.50	
Stay-at-home	93	3.91	.952	3.72	4.11	3.72	4.10	
Teacher	34	3.79	1.095	3.41	4.18	3.42	4.16	
Employee	31	3.65	.915	3.31	3.98	3.31	3.96	
Professional	29	3.93	.998	3.55	4.31	3.59	4.28	
Not reported	9	3.67	1.118	2.81	4.53	2.92	4.40	
Entrepreneur	5	2.20	.837	1.16	3.24	1.50	3	
Student	1	5.00	.	.	.	.	.	

## Regression Models

Lastly, carried out different regression models to find out which of the three categories of the happiness scale has the greatest influence over the total score. Here, we can see from Table 9 that the  $\beta$  coefficient is greater in Model 2, which takes as an independent variable the score obtained in the category related to Satisfaction with Life, and also the

Joy of Living category. This better fit model assumption is supported by the Akaike Information Criterion (AIC) and the Bayesian Information Criterion (BIC) shown in table 10 for every model, which postulate that lower values indicate a better fit model. On the view of the minimum discrepancy between the traditional method IC and the Bootstrap, the AIC and BIC were performed without bootstrap.



Table 9 Influence of categories from the happiness scale

Model	R	Standard Error	Change in F	$\beta$	Dev. Error	IC 95% Traditional method		IC 95% Bootstrap method	
						Inferior	Superior	Inferior	Superior
1	.611	.373	5.56	135.173					
(Constant)				59.11	2.03	55.1	63.12	54.73	63.42
Satisfaction with life				1.04	.09	.865	1.21	.855	1.22
2	.648	.42	5.34	164.53					
(Constant)				58.34	1.9	54.59	62.1	54.02	62.44
Personal Fulfillment				1.157	.09	.979	1.33	.973	1.34
3	.52	.271	5.99	84.247					
(Constant)				63.39	2.1	59.24	67.54	58.22	68.06
Joy of Living				.997	.106	.767	1.187	.753	1.22

Note: The variable used as a constant here is total score from happiness scale, while the variables that were used as independent in the three models were: model 1 = satisfaction with life. Model 2 = Personal fulfillment. Model 3 = Joy of Living.

Table 10 Model fit values

Model	AIC	BIC
1	1432.76	1443.06
2	1421.78	1432.09
3	1474.33	1484.64

## Discussion and Conclusion

Were able to observe significant differences between the sex of the participants, where men reported greater Satisfaction with life in contrast to an “ideal life,” as well as what could be considered being “grateful with life” because it has been “good” to them.

It was observe that students whose father is retired had a stronger belief about never being happy (see table 7), while those who scored the least on this item were actually the children of public servants. On the other hand, children of teachers report having a more placid life than the children of farmers and retirees. When considering the occupation of the mother, children whose mothers were merchants reported greater Satisfaction with their life, while the children of businesswomen obtained the lowest scores in this category. This aspect of family relationships has been studied in a Latin-American context and found to be of importance (Yamamoto, 2016). Through this lens, the roles and meaning of their parents' occupations may be moderators of happiness and perceived well-being. However, due to limitations inherent to the quantitative approach, we will not be able to know these types of “moderators” in depth, so a line of research would be opening where qualitative research approaches can be useful towards discovering these meanings.

In terms of differences found by academic departments, we observed that students in the Literature department perceived a greater positive meaning in their lives, while students from Mechanical Engineering scored lowest. However, something interesting to observe is that these same students (Mechanical Engineering) report being more Satisfied with life, a greater degree of Personal fulfillment and Joy of living. Here we should consider the importance of carrying out activities that are satisfactory and generate a commitment to maintain said activities despite any difficulties that may arise (Sheldon & Lyubom-

irsky, 2019). Should keep in mind that the category “Positive sense of life” refers to the presence of depressive states in people, so it may be possible that, despite presenting symptoms or negative emotional states, people may overcome these and continue to have a good **Satisfaction with life, Personal fulfillment, and Joy of living**. In regard to this, it is convenient to remember what was found in the regression models, which give us an idea of which factors influence the happiness of students who participated to a greater extent. If we consider  $\beta$  coefficients, we see that the factor with the highest level of influence is Personal fulfillment, followed by Satisfaction with life, and lastly Joy of living. We should also keep in mind that Personal fulfillment, as defined in the instruments section, includes aspects of emotional tranquility and accessibility to achieve the necessary elements to achieve happiness. **Satisfaction with life** refers to the degree to which the goals proposed by individuals can be achieved, which ultimately and ideally would represent having an “ideal life” within reach. Finally, the Joy of living category considers positive experiences and feelings of well-being that students have lived during their life in general and their academic life as well. In this way, given that students do not work in isolation, it is worth to highlight the arguments made by Quoidbach et al. (2019) whom found that positive social interactions, especially those that offer support during unpleasant situations, will be decisive towards the happiness and the well-being of that person so that they do not decline when encountering difficulties in general, but in their academic life in particular.

One aspect that seemed interesting was finding that a Positive sense of life did not influence happiness, since its regression model was not statistically significant, even when applying the sampling simulation method to it. This suggests that aspects such as the presence of depressive states do not represent a negative aspects per se, as long as the other dimensions of happiness that were studied in this research are kept in good condition, which then can function as protective factors for health (Kushlev et al. 2020).

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