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Artículos científicos

Análisis descriptivo de las diferencias por sexo en los estudiantes de licenciatura de la Universidad de Guadalajara

*A Descriptive Analysis of the Differences by Sex in Undergraduate Students
at the University of Guadalajara*

*Análise descritiva das diferenças por sexo em alunos de graduação da
Universidade de Guadalajara*

Salvador Sandoval Bravo

Universidad de Guadalajara, Departamento de Métodos Cuantitativos, México
salvador.sandoval@academicos.udg.mx
<https://orcid.org/0000-0001-9434-6536>

Pedro Luis Celso Arellano

Universidad de Guadalajara, Departamento de Métodos Cuantitativos, México
pedro.celso@academicos.udg.mx
<https://orcid.org/0000-0003-3856-6344>

Victor Hugo Gualajara Estrada

Universidad de Guadalajara, Departamento de Métodos Cuantitativos, México
victor.gualajara@academicos.udg.mx
<https://orcid.org/0000-0002-5405-3779>

Resumen

Existen características biológicas y psicológicas que distinguen a hombres y mujeres. Si bien tales diferencias se manifiestan en todas las áreas de la vida y en todas sus etapas, particularmente se evidencia en la etapa universitaria, donde se suscitan en los jóvenes cambios personales trascendentales. El presente estudio tiene como finalidad hacer un estudio comparativo para identificar y cuantificar las diferencias por sexo que existen entre los estudiantes de licenciatura de la Universidad de Guadalajara. Se analizaron distintas variables de diversa índole: desde demográficas y académicas hasta de orientación sexual, adicciones y de bienestar general. Los datos se obtuvieron a partir de una consulta *online* e incluye una muestra de 5245 alumnos de licenciatura de los diferentes centros universitarios de la zona metropolitana de Guadalajara y regionales de Jalisco. Se realizó un análisis gráfico, descriptivo e inferencial de las diferencias por sexo. Los resultados revelan diferencias significativas en la mayoría de los rubros analizados; por ejemplo, la proporción de mujeres que son madres es mayor que la de hombres que son padres (4.57 % vs. 2.69 %); las mujeres tienen una calificación promedio mayor a la de los hombres (86.40 vs. 84.75), y el porcentaje de quienes han probado alguna droga es mayor en hombres que en mujeres (34.67 % vs. 22.57 %).

Palabras clave: adicción, bienestar del estudiante, estudiantes universitarios, rendimiento escolar, sexo.

Abstract

There are biological and psychological characteristics that distinguish men and women. Although such differences are manifested in all areas of life and in all its stages, it is particularly evident in the university stage, where transcendental personal changes occur in young people. The present study aims to carry out a comparative study to identify and quantify the differences by sex that exist among undergraduate students at the University of Guadalajara. Different variables of various kinds were analyzed, from demographic and academic to sexual orientation, addictions and general well-being. The data was obtained from an online consultation and includes a sample of 5245 undergraduate students from different university centers in the metropolitan area of Guadalajara and regional centers in the state of Jalisco. A graphic, descriptive and inferential analysis of the differences by sex

was carried out. The results reveal significant differences in most of the items analyzed; for example, the proportion of women who are mothers is higher than that of men who are fathers (4.57 % vs. 2.69 %); women have a higher average score than men (86.40 vs. 84.75), and the percentage of individuals who have tried a drug is higher in men than in women (34.67 % vs. 22.57 %), among other findings.

Keywords: addiction, student welfare, college students, academic performance, sex.

Resumo

Existem características biológicas e psicológicas que distinguem homens e mulheres. Embora tais diferenças se manifestem em todas as áreas da vida e em todas as suas etapas, é particularmente evidente na fase universitária, onde ocorrem mudanças pessoais transcendentais nos jovens. O objetivo deste estudo é realizar um estudo comparativo para identificar e quantificar as diferenças por sexo que existem entre os alunos de graduação da Universidade de Guadalajara. Diferentes variáveis de vários tipos foram analisadas: desde demográficas e acadêmicas até orientação sexual, vícios e bem-estar geral. Os dados foram obtidos a partir de uma consulta online e incluem uma amostra de 5.245 alunos de graduação de diferentes centros universitários da área metropolitana de Guadalajara e áreas regionais de Jalisco. Foi realizada uma análise gráfica, descritiva e inferencial das diferenças por sexo. Os resultados revelam diferenças significativas na maioria dos itens analisados; por exemplo, a proporção de mulheres que são mães é maior do que a de homens que são pais (4,57% vs. 2,69%); as mulheres têm pontuação média superior à dos homens (86,40 vs. 84,75), e o percentual de pessoas que já experimentaram alguma droga é maior nos homens do que nas mulheres (34,67% vs. 22,57%).

Palavras-chave: dependência, bem-estar do aluno, estudantes universitários, desempenho escolar, sexo.

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Introduction

Previously, university education was a predominantly male space. Men were preparing themselves in the different fields of knowledge to occupy the positions demanded by the labor market, achieve professional success and social recognition; while women were relegated to more domestic roles such as procreation, taking care of household duties and caring for children. Fortunately, during the last decades, the situation has changed and a turnaround has been achieved that has favored the increasing entry of women to different educational levels, especially in higher education, where the number and percentage is increasing. of women who enter and graduate from universities, thanks to which they have been able to successfully incorporate themselves into the professional sphere (Papadópulos and Radakovich, 2006). It should be noted that, in the academic field, the structures of balance between the sexes are increasingly strengthened, which allow coexistence and equal competition between men and women.

In this way, the increasing participation of women in higher education has contributed to reverting the conditions of submission and discrimination in which they found themselves, and has caused the possibilities of integrating with their full potential in the labor market, to achieve independence economic and strengthen their personal and professional development are higher (Aponte, 2008). In the future, this process will translate into the construction of solid social structures with greater parity between the sexes in all areas of human activity, where women and men work harmoniously and under equal conditions for the common welfare.

However, although the gap between the sexes has recently narrowed at the university level, there are still notable differences due to biological, psychological or cultural considerations that affect in various ways (for example, the assignment of family roles). And the same happens in the labor market, where there are still evident contrasts either in the type of employment or in the working conditions, either in access to decision-making positions and power or in salary (García, 2005).

One of the most outstanding aspects regarding the balance between the sexes is the sustained increase of women in the enrollment, permanence and graduation of the universities. In fact, in most Latin American countries, the female population already exceeds the male population, in some cases in significant proportions (Papadópulos and Radakovich, 2006). In Mexico, there is a certain percentage balance at the university level, although the

female population is slightly higher (Barrón, Madera and Cayeros, 2018). Regarding the distribution of enrollment by area of knowledge, some significant differences also persist. For example, in Mexico there are male strongholds such as engineering, but there are also female strongholds such as nursing, social work and tourism; However, there are also areas where there are no significant differences between both sexes, as in many health sciences and economic-administrative sciences degrees (Huerta, 2017).

The differences between the sexes in school performance at the undergraduate level have been analyzed by various investigations with different approaches; the results are often contradictory. Some studies focus on measuring cognitive skills, others give preponderance to emotional intelligence, some more to spatial and abstract reasoning, a bulk of studies focus on verbal skills, the same on the effective application of study techniques ... And if While it is true that it is possible to find significant differences, important similarities can also be identified (Pantoja and Alcaide, 2013). Neither in terms of final grades by subjects, or in the percentages of entry, permanence or graduation from the careers, are there conclusive results and these may vary from one study to another (Oyarzún, Estrada, Pino & Oyarzún, 2012). It goes without saying that there are other variables that affect, to a greater or lesser degree, academic performance, such as motivation, social skills, self-control, personality styles, and other social and cultural factors that may or may not vary depending on the individual. sex of the students (Torres, 2011).

On the other hand, in the university environment, sexual behaviors such as the sexual orientation of students (mainly heterosexual, homosexual and bisexual) tend to take hold, both in men and in women, that manifest themselves from childhood and adolescence, and that permeate the personality and development of young people in all areas of life, as well as condition their physical and emotional health (Barra, 2013; Oswalt and Wyatt, 2013; Paredes and Polanski, 2016). For this reason, it is important to recognize that there is a manifest plurality of sexual orientations in the university sphere, and that in recent years there is acceptance, tolerance and respect for these differences.

In another order of ideas, all university students, whether they are men or women, are subject to social and economic pressures, emotional stress, academic tensions and family problems; These factors can cause or accentuate the consumption of drugs, tobacco or alcohol in students (Gómez, Landeros, Noa & Martínez, 2017). Undoubtedly, the growing incidence of addictions in the academic environment is a permanent concern and a health problem that

can have important consequences: reduce the school performance of young people, cause school dropouts or even cause irreversible damage to the health of young people. It is important to know the situation in detail and implement educational policies that allow controlling and reducing addictions at the undergraduate level (Fernández et al., 2013; Motos, Cortés, Giménez & Cadaveira, 2015).

Another question of interest regarding the sex of undergraduate students is to analyze well-being from a psychological and social perspective that considers the integral relationship of individuals with their family, social and work environment (Barrantes and Ureña, 2015; Del Valle , Hormaechea and Urquijo, 2015). Given the roles traditionally assigned to men and women, different or similar levels can be distinguished in some indicators of well-being, such as self-acceptance, positive relationships with other people, autonomy, life purpose, personal growth, among others. The previous indicators can be reflected in the personal perception of the university students regarding their happiness; and their level of personal satisfaction with respect to their own health, their economy, their occupation, their family relationships, their friendly relationships, their free time, the school environment, etc. (Del Valle et al., 2015; Lara, Saldaña, Fernández and Delgadillo, 2015).

Thus, considering the aspects briefly referenced in the previous paragraphs, the present study aims to carry out a comparative analysis at a descriptive level of the contrasts and similarities by sex that exist among undergraduate students at the University of Guadalajara (UdeG). It should be noted that this research focuses on differences by sex, not by gender. The first refers to the differences and biological, anatomical, physiological and genetic characteristics of human beings that define men and women, while the second refers to the series of ideas, behaviors and attributes that a given society considers appropriate for each sex (Abad, Ramírez, Fernandes and Ramirez, 2019). In this sense, each of the variables analyzed in this work make a clear distinction between men and women without mentioning this set of conceptions, behaviors and socially and culturally associated attributions to gender.

Various indicators were examined, including demographic, academic, sexual orientation, addiction-related, and general well-being variables. From the data that will be presented, it will be possible to observe that there are variables that do not show significant differences by sex, while in some others the differences are very evident. The information collected was obtained from a representative sample of undergraduate students from the different university centers that make up the UdeG.

In addition to all the above, a distinction is drawn between university centers in the Guadalajara metropolitan area (ZMG) and regional university centers. As its name indicates, the former are located in the city of Guadalajara, whose metropolitan area is home to around five million people; the other university centers, the regional university centers, are located in small cities, so their student population is made up of a significant percentage of rural populations. In this sense, there are important differences between both groups of students determined by family issues, tradition, income, urban infrastructure, size of school facilities, access to technology and connectivity, mobility, among others (Parker and Pederzini, 2000; Ramos, Duque and Nieto, 2012); characteristics that, in one way or another, also affect the question of the differences between the sex of university students, as can be seen in the results of this research.

This work is important since it reveals the current state of the differences between the sexes that exist in the UdeG student population through a graphic, descriptive and inferential analysis that includes many variables of interest from different areas.

Methodology

The database consulted to make this document was obtained from a query addressed to active high school and undergraduate students of the UdeG during the first semester of 2019, carried out by the Federation of University Students (FEU), which It is the only student organization recognized by UdeG. The consultation collected general information about the students, demographic data, mental and physical health, eating habits, addictions, sports practice and discrimination, among others.

The query was applied online through the Google Forms platform of mixed forms, randomly, anonymously and voluntarily during the first half of 2019. A structured questionnaire was applied containing questions with possible answers on a Likert scale or with binary answers. The questionnaire was applied to all the students of certain groups at random from each university center of the ZMG and regional: approximately 10% of the student population of each center, so the students surveyed are from different semesters, shifts, sexes and careers . At the university network level, the original sample consisted of 9638 students. For the purposes of this work, this preliminary sample was refined to eliminate poorly filled out questionnaires, with incomplete, null or inconsistent responses. In this way, the final sample consisted of 5,245 elements from a population of 114,314 undergraduate

students (UdeG, 2019), which guarantees a confidence level of at least 95% for the inferential statistics tests. At least 196 students from each university center from both the ZMG and regional university centers were surveyed. The six university centers of the ZMG are: Centro Universitario de Ciencias Económico Administrativas (Cucea), Centro Universitario de Ciencias Exactas e Ingeniería (Cucei), Centro Universitario de Ciencias Biológicas y Agropecuarias (Cucba), Centro Universitario de Arte, Arquitectura y Diseño (Cuaad), Centro Universitario de Ciencias de la Salud (CUCS) y Centro Universitario de Ciencias Sociales y Humanidades (Cucsh). Los nueve regionales son: Centro Universitario de la Costa (CUCosta), Centro Universitario de la Costa Sur (CUCSur), Centro Universitario de los Altos (CUAltos), Centro Universitario de los Lagos (CULagoS), Centro Universitario de los Valles (CUValles), Centro Universitario de la Ciénega (Cuci), Centro Universitario del Sur (Cusur), Centro Universitario del Norte (CUNorte) y el Centro Universitario de Tonalá (CUTonalá).

Likewise, 19 inferential statistics tests were carried out, most of the portions and more of arithmetic means to test hypotheses regarding differences between sexes, involving a series of variables of interest: from demographic indicators to academic variables, sexual preferences, etc. addiction and wellness. These tests contrast a series of hypotheses that show whether or not there are significant differences by sex taking into account a series of variables such as marital status, having children or not, average weekly income, average academic performance, the shift chosen by the students. students, time spent in school, drug use, alcohol use, tobacco use, level of happiness, satisfaction with personal health, satisfaction with personal finances, occupational satisfaction, satisfaction Regarding family relationships, satisfaction with friendships, satisfaction with free time and satisfaction with the school environment. Consequently, given the large number of variables considered and their heterogeneity, this work is of a general and exploratory nature.

Also, in most of the tests, three subtests were performed: one considering only the ZMG centers, another for the regional centers and another considering all the centers of the university network. The significance level of all statistical tests was 5%. SPSS statistical software was used to carry out these tests. Of course, the descriptive charts of all the tests were constructed to illustrate the results in the easiest and most affordable way possible.

Finally, it should be noted that the enrollment report for the first semester of 2019 (UdeG, 2019) was used, which contains information on the students enrolled in all the schools of said university, both at the upper level and at the upper secondary level.

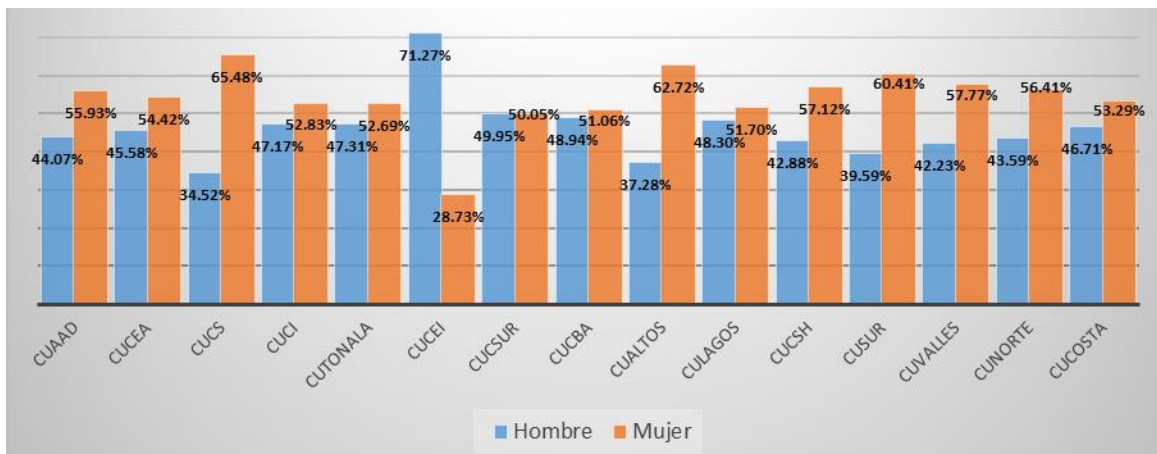
Results and Discussion

The descriptive analysis of the data collected by category of variables is presented below. The data is accompanied by some comments, possible reasons for the results shown, but without pretending to demonstrate such speculations, simply to encourage discussion given the general and exploratory nature of the study.

Demographic indicators

According to the UdeG (2019), 47.09% of the students are men and 52.91% are women. Figure 1 shows the percentage distribution by sex in the centers of the university network. It can be noted that there are university centers with a considerably higher percentage of women: CUCS (65.48%), CUAltos (62.72%) and CUSur (60.41%); while the university centers with the highest percentage of men are Cupei (71.27%), CUCSur (49.95%) and Cucba (48.94%). This distribution of enrollment by sex, where the number of women exceeds the number of men, is in accordance with the behavior and trend at the national and Latin American level (Barrón *et al.*, 2018; Papadópulos y Radakovich, 2006).

Figura 1. Distribución por sexo y centro universitario



Fuente: Elaboración propia

Considering all the university centers in the network, and regarding the marital status of the students, significant differences can be seen in the percentages by sex (see table 1). There is a higher percentage of married and divorced women than men (2.35% vs. 1.06% and 0.40% vs. 0.31%, respectively), while in men the share of single and widowed is greater (95.95% vs. 94.65% and 0.18% vs. 0.10%). The same pattern, but more accentuated, is

observed in the regional centers for married and divorced women (2.85% vs. 0.79% and 0.42 vs. 0.10%, respectively) and for singles and widowers (96.15% vs. 94.47% and 0.30 vs. 0.08%, respectively). However, in the ZMG university centers there are no significant differences in the percentages by sex (see annex, test 1). A possible cause that the percentage of married women is higher than that of men is because traditionally (either for cultural reasons, family pressure or unwanted pregnancies) women marry on average younger than these and this factor can match the age at which they are studying at university.

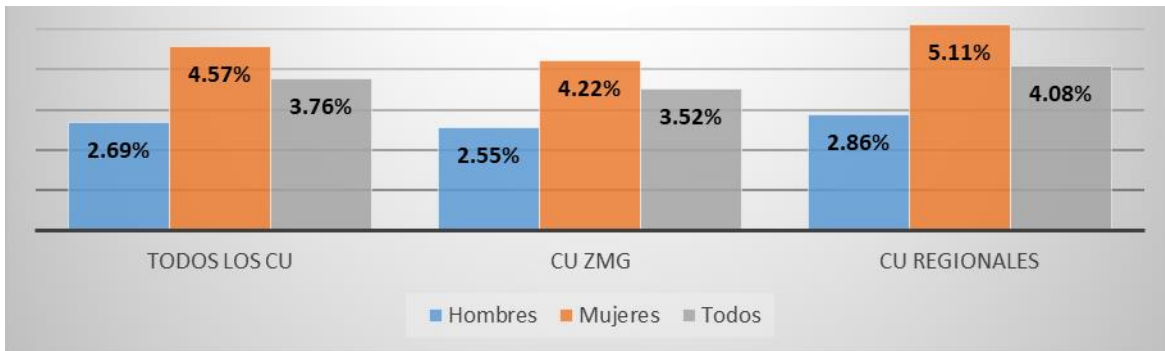
Tabla 1. Estado civil por sexo

Estado civil	Todos			Centros en la ZMG			Centros regionales		
	Hombre (%)	Mujer (%)	Total (%)	Hombre (%)	Mujer (%)	Total (%)	Hombre (%)	Mujer (%)	Total (%)
Casado	1.06	2.35	1.79	1.27	2.02	1.71	0.79	2.85	1.90
Divorciado	0.31	0.40	0.36	0.48	0.39	0.43	0.10	0.42	0.27
Soltero	95.95	94.65	95.21	95.78	94.77	95.19	96.15	94.47	95.24
Viudo	0.18	0.10	0.13	0.08	0.11	0.10	0.30	0.08	0.18
Otro	2.51	2.49	2.50	2.39	2.70	2.57	2.67	2.18	2.40
Total general	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	0	0	0	0	0	0	0	0	0

Fuente: Elaboración propia

Now, as can be seen in Figure 2, the percentages of students who are parents also show significant differences: the proportion of women who do have children is considerably higher than that of men (4.57% vs. 2.69% in all university centers; 4.22% vs. 2.55% only in those of the ZMG). This trend is even more marked in the regional centers (5.11% vs. 2.86%). This suggests that in rural areas women at the university level are more likely to become pregnant and have children, compared to what happens in urban areas (see annex, test 2).

Figura 2. Porcentaje de estudiantes que son padres por sexo

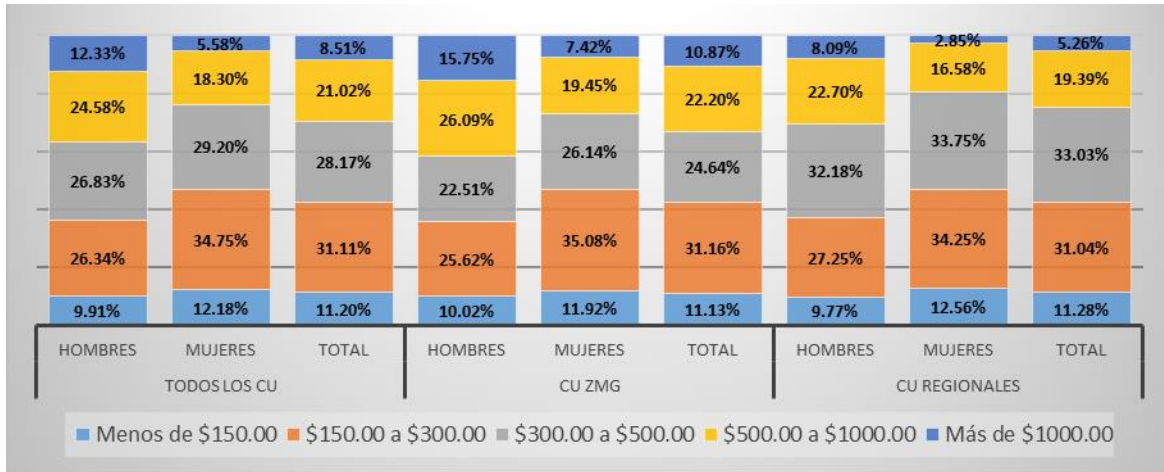


Fuente: Elaboración propia

Regarding the average weekly income by sex (see figure 3)¹, If we take into account all the university centers, it is noted that men are more favored than women, since the highest income levels, from 500 to 1,000 pesos and more than 1,000 pesos, are clearly higher in men (24.58% and 18.30%). %, respectively) in contrast to the same income levels for women (12.33% and 5.58%, respectively). The opposite case is observed in the lowest income levels. The levels of less than 150, 150 to 300 and 300 to 500 pesos present clearly higher percentages in women (12.18%, 34.75% and 29.20%, respectively) than in men (9.91%, 26.34% and 26.83%, respectively). Regarding the intermediate level of 300 to 500 pesos, no significant differences are observed. At the regional level, this trend is even more marked than in the ZMG. Thus, the results suggest that there is either some discrimination between fathers and daughters, or that the salaries of working men are better paid than the salaries of women (see annex, test 3).

¹ Este ingreso puede ser por remuneración laboral o por asignación familiar (generalmente a cargo de los padres).

Figura 3. Porcentaje del ingreso semanal por sexo

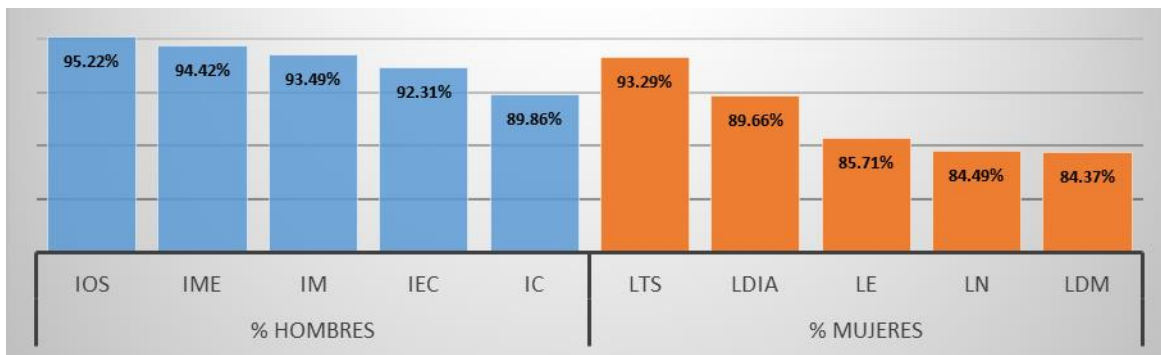


Fuente: Elaboración propia

Academic indicators

According to the UdeG (2019), as can be seen in figure 4, the careers with the highest percentage of men enrolled are engineering in Works and Services (95.22%), Mechanical Electrical engineering (94.42%), Mechatronics engineering (93.49%), Electronic and Computer Engineering (92.31%) and Computer Engineering (89.86%). While the careers with the highest percentage of women are a degree in Social Work (93.29%), a degree in Interior Design and Atmosphere (89.66%), a degree in Nursing (85.71%), a degree in Nutrition (84.49%) and a degree in Design of Fashion (84.37%). It is very well known that engineering careers continue to be predominantly male, while in the branches of social work, design and nursing the female sex prevails, which is in accordance with the behavior at the national level in most universities (Huerta, 2017).

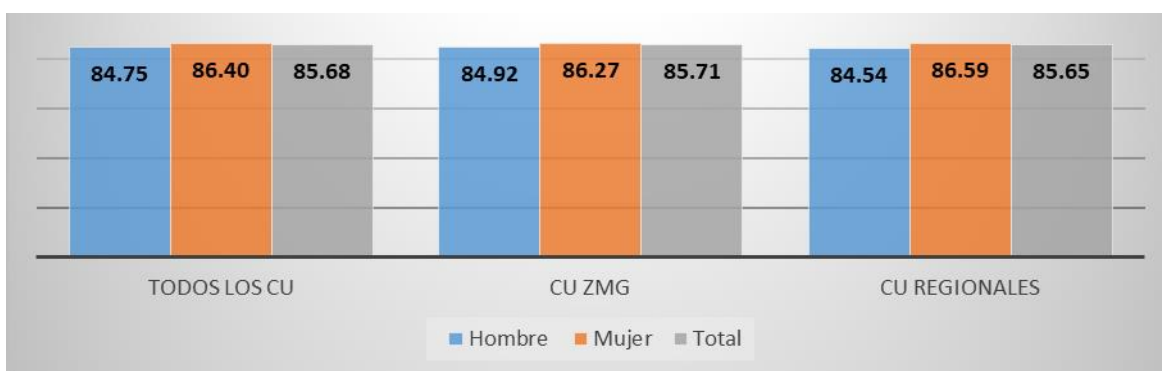
Figura 4. Carreras con mayor porcentaje de hombres y mujeres



Fuente: Elaboración propia

Regarding the average scores by gender, here there are significant differences. In general, the average is higher in women. If all university centers are taken into account, we have 84.75% in men vs. 86.40% in women; when considering only the centers of the ZMG, we have 84.92% in men vs. 86.27% in women, and in the regional centers 84.54% were registered in men vs. 86.59% in women, as can be seen in figure 5 (see annex, test 4). These results may be due to the greater number of hours dedicated to studying by women (which coincides with the information provided in Figure 7), to the fact that the percentage of women who work at the university level is lower than that of men (what which provides additional hours to study) or just your best study habits.

Figura 5. Calificación promedio por sexo

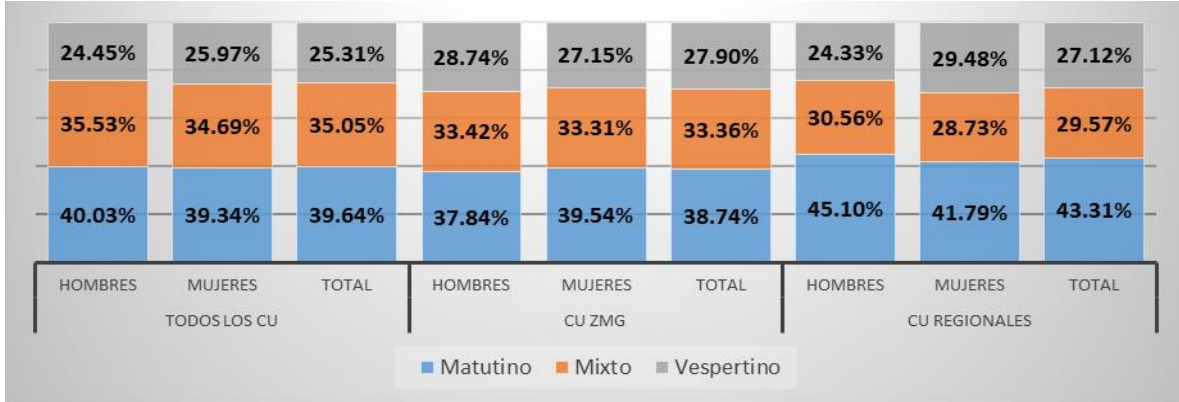


Fuente: Elaboración propia

Regarding the distribution by shift, if all the university centers or only those of the ZMG are taken into account (see figure 6), there are no significant differences in the percentages by sex. On the contrary, when observing exclusively the behavior of the regional centers, the percentage of men in the morning shift is significantly higher than that of women

(45.10% vs. 41.79%) and that, inversely, the percentage of women in the evening shift is considerably higher than the corresponding percentage of men (29.48% vs. 24.33%). This may be due to the fact that a higher percentage of men work in the afternoons, while women, in a greater proportion, stay at home to help with housework (see annex, test 5).

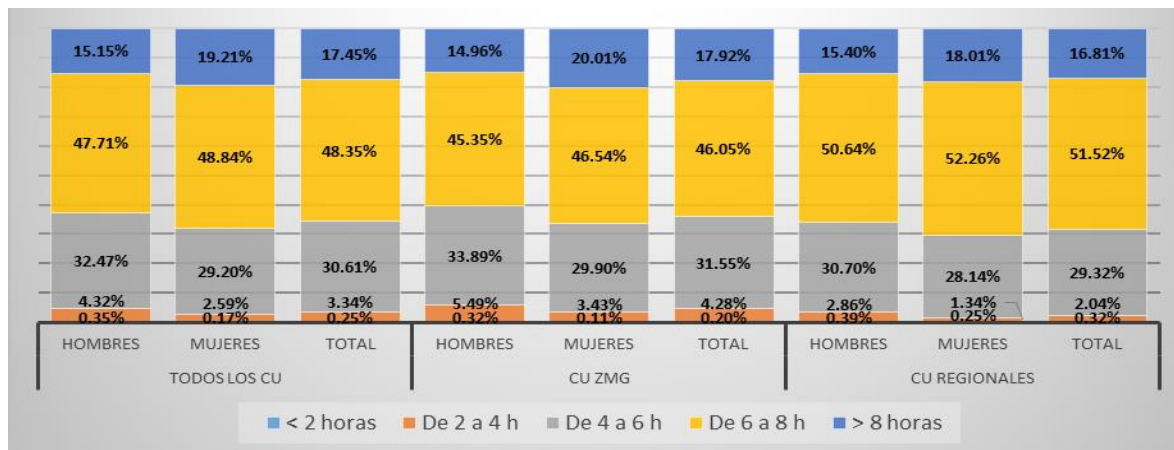
Figura 6. Distribución del turno por sexo



Fuente: Elaboración propia

Now, when analyzing the hours that students remain in school (see figure 7), significant differences are noted in the percentages by sex. Thus, the percentages corresponding to the ranges of more hours of daily stay at school (ranges of six to eight hours and more than eight hours) are clearly higher in women than in men (48.84% vs. 47.71% and 19.21% vs. 15.15%, respectively); while for the ranges of fewer hours of permanence in school (from two to four hours and less than two hours) the opposite is true (2.59% vs. 4.32% and 0.17% vs. 0.35%). It is worth noting that these behaviors are identical when considering the ZMG and regional centers (see annex, test 6), which suggests that women are to some extent more dedicated to academic tasks than men; Another possible explanation is that they have more free time and prefer to stay and develop extracurricular activities at school.

Figura 7. Permanencia diaria en la escuela por sexo

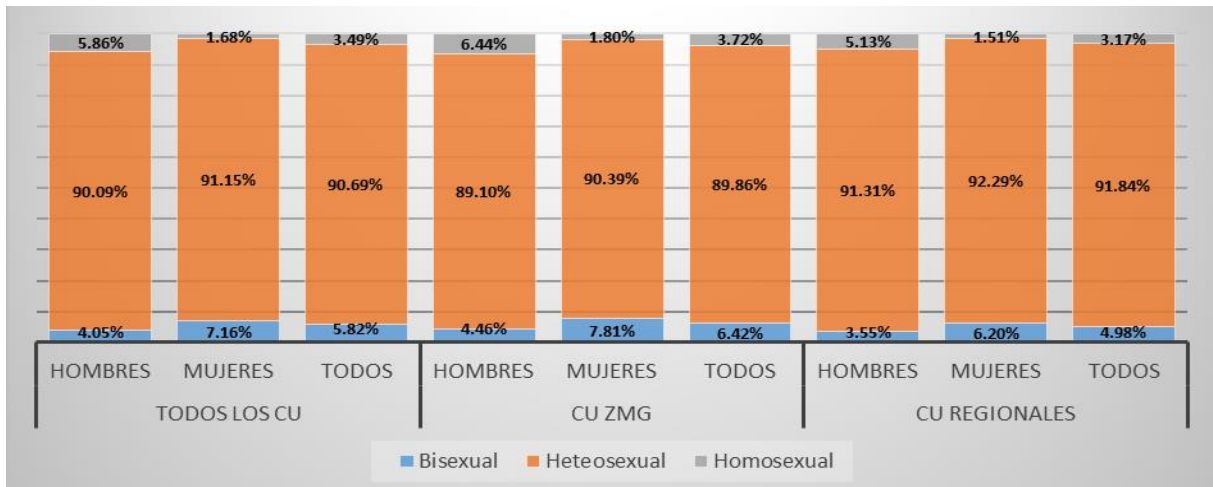


Fuente: Elaboración propia

Sexual orientation

In figure 8 the sexual orientations by sex can be observed. There, it can be seen that the percentage of bisexual women is significantly higher than the corresponding percentage of men (6.20% vs. 3.55%), while the percentage of homosexual men is significantly higher than the corresponding percentage of women (5.13% vs. 1.51%). On the other hand, the percentages of heterosexuals, both men and women, do not present significant differences. There are also some important differences between the percentages of heterosexuals, on the one hand, and homosexuals and bisexuals, on the other. The percentage of heterosexuals in regional centers is higher than that of the ZMG, both in men and women and in the one that adds both sexes (91.31%, 92.29% and 91.84% vs. 89.10%, 90.39% and 89.86%, respectively). While the percentage of homosexuals and bisexuals (the sum of both) in the regional headquarters is less than the same percentage in the ZMG; also here in both men and women and both sexes (8.68%, 7.71% and 8.15% vs. 10.90%, 9.61% and 10.14%, respectively), which may suggest a greater openness in sexual matters in the student population of the ZMG than in the regional headquarters (see annex, test 7).

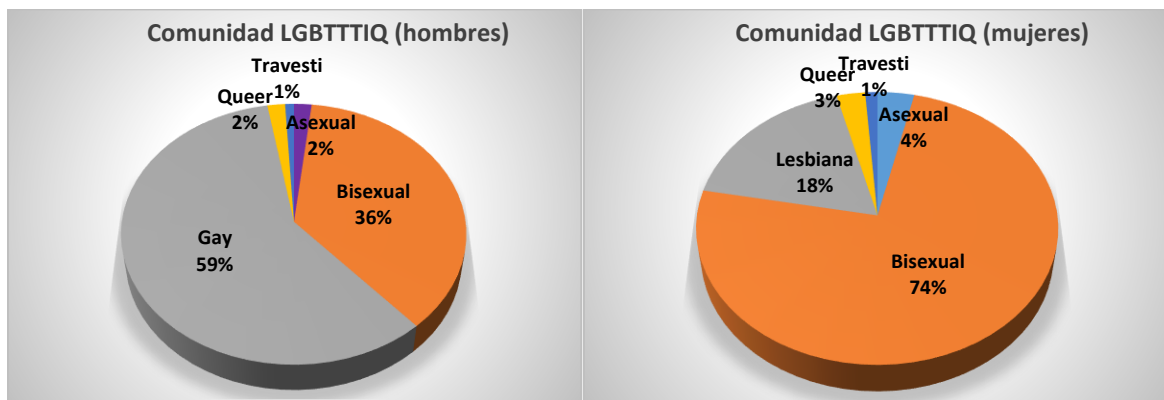
Figura 8. Orientación sexual por sexo



Fuente: Elaboración propia

As for those who identify with the LGBTTTIQ community, gays and bisexuals predominate in men (56% and 36% respectively); while in women, bisexuals and lesbians prevail (74% and 18% respectively) (see figure 9). It should be noted that there is a correspondence between this and the previous figure, which corroborates the fact that, even though they are parallel categories in men and women, there are more gays than lesbians. This suggests that, if there is no biological, psychological or sociocultural factor that induces this condition, acceptance of this sexual orientation seems to be more normal in men than in women. In both sexes there are also transvestites, asexuals and those who identify with the queer category, although in much lower percentages.

Figura 9. Identificación con la comunidad LGBTTTIQ

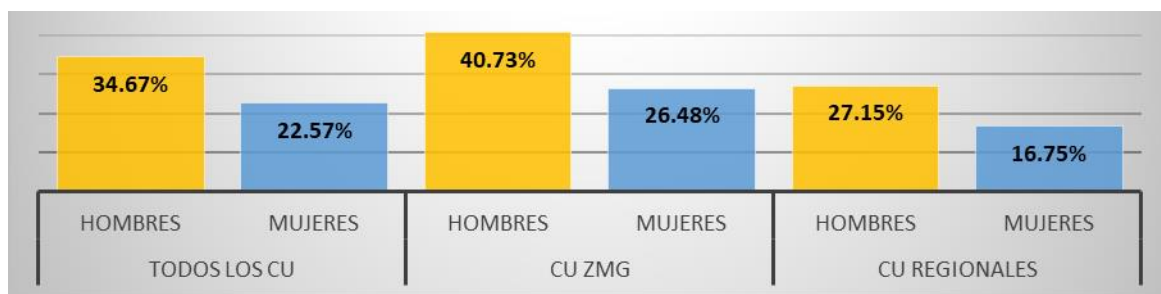


Fuente: Elaboración propia

Addictions

Regarding the issue of addictions, the intake of drugs, alcohol and tobacco was consulted. With regard to drugs (marijuana, cocaine, heroin, inhalants, tranquilizers, amphetamines, ecstasy, LSD, and the like), significant differences can be observed in the percentages by sex of those who have ever tried drugs (see figure 10). In all university centers, the proportion of men is clearly higher than that of women (34.67% vs. 22.57%). But, if we consider the students of the ZMG university centers, this behavior is more accentuated (40.73% in men vs. 26.48% in women). In the regional centers, although this pattern is preserved (27.15% in men vs. 16.75% in women), the percentages are comparatively lower. This may be due to a more relaxed awareness regarding drug use in urban areas or to a greater circulation of narcotics in the city (see annex, evidence 8).

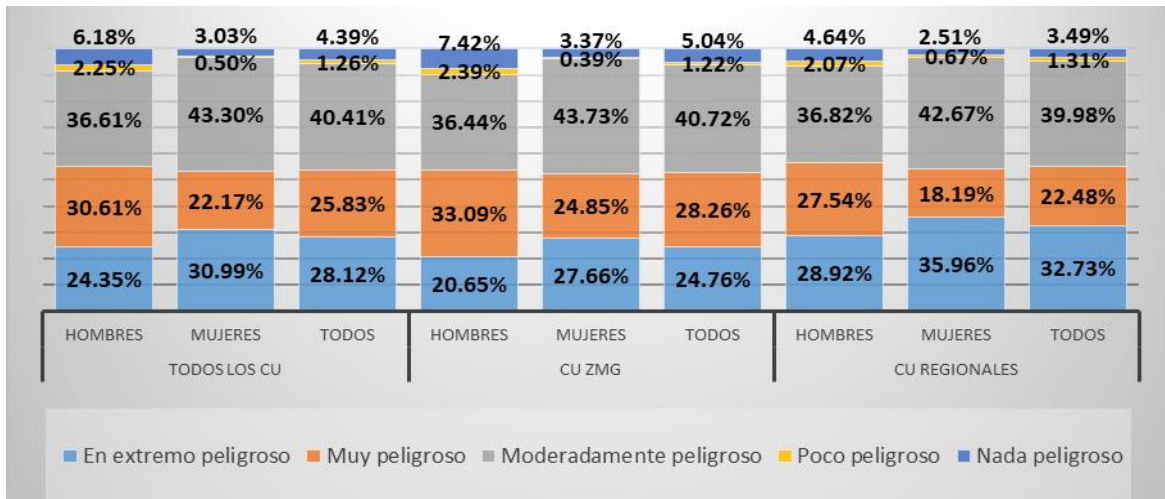
Figura 10. Consumo de drogas por sexo



Fuente: Elaboración propia

As a complement to the previous graph, in figure 11 it can be observed that such a difference in drug use can be explained by the perception of danger that these generate in both sexes (see annex, test 9). The “Extremely dangerous” scale is significantly higher in women than in men both in all university centers (30.99% vs. 24.50%) and only in regional centers (35.96% vs. 28.92%) and only in ZMG centers (27.66% vs. 20.65%). As is known, risk-taking and perception is a characteristic of the configuration of certain masculinities. In this sense, consumption can be encouraged by the group of friends, by the pressure that is exerted and by the sense of belonging that it generates. This comment can also be extended to alcohol and tobacco.

Figura 11. Percepción del peligro por consumir drogas



Fuente: Elaboración propia

Regarding the proportion of those who have ever consumed alcohol (see figure 12), it is significantly higher in men than in women (61.01% vs. 53.62%, if we consider all university centers; 62.60% vs. 56.94% taking into account only those of the ZMG, and 56.56% vs. 48.66% for regionals). On the other hand, alcohol consumption is higher in the ZMG centers than in the regional ones for both men (64.60% vs. 56.56%) and for women (56.94% vs. 48.66%). This shows a greater predisposition to alcohol consumption in urban areas, which may be due to the recent boom in canteens, snack bars and breweries in the ZMG (see annex, test 10).

Figura 12. Consumo de alcohol por sexo

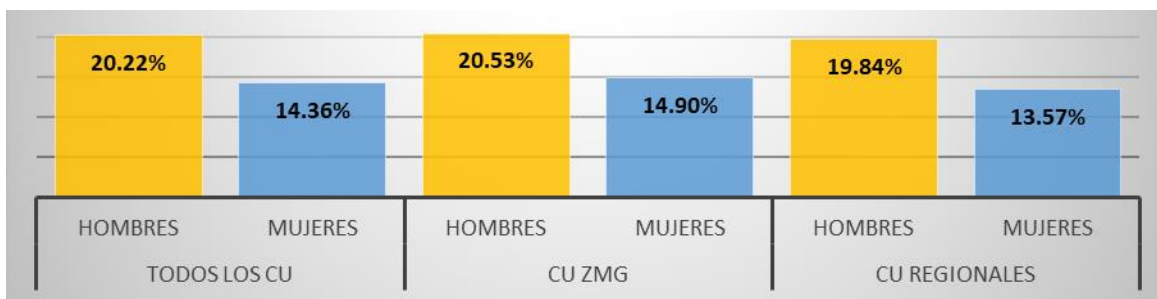


Fuente: Elaboración propia

Similarly, with regard to the proportion of those who have ever used tobacco (see figure 13), the percentage corresponding to men is higher than that of women (20.22% vs. 14.36% if we consider all university centers; 20.53 % vs. 14.90% taking into account only those of the ZMG, and 19.84% vs. 13.57% for regionals). As with alcohol, although more

moderately, tobacco consumption is higher for ZMG university centers compared to regional centers for both men (20.53% vs. 19.84%) and women (14.90% vs. 13.97%). And similarly to what happens with alcohol, this greater predisposition to tobacco consumption in urban areas may also be due to the rise of canteens, snack bars and breweries in the ZMG (see annex, test 11).

Figura 13. Consumo de tabaco por sexo



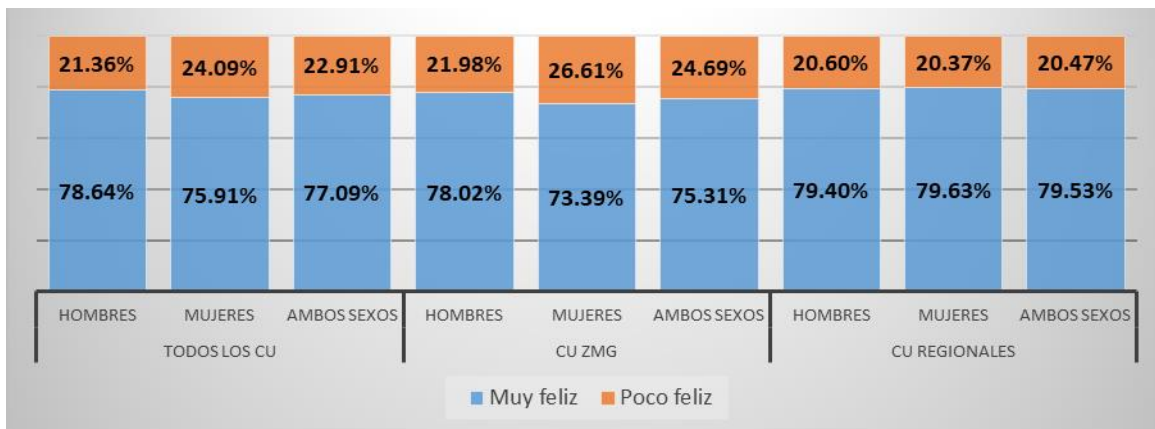
Fuente: Elaboración propia

Wellness

The happiness levels and the different types of satisfaction shown below were taken from the standards of the Commission on the Measurement of Economic Performance and Social Progress (also known as the Stiglitz-Sen-Fitoussi Commission).

Regarding the perception of the level of happiness of the students in their environment (see figure 14 and test 12 in the annex), men are significantly happier, both in general terms (78.64% vs. 75.91%) and at the ZMG level (78.02% vs. 73.99%). This can be explained, intuitively, by the fact that men have a higher average income, greater job opportunities and greater freedoms in the family, social and work environment. There are no significant differences in regional university centers. (79.40 % vs. 79.63 %).

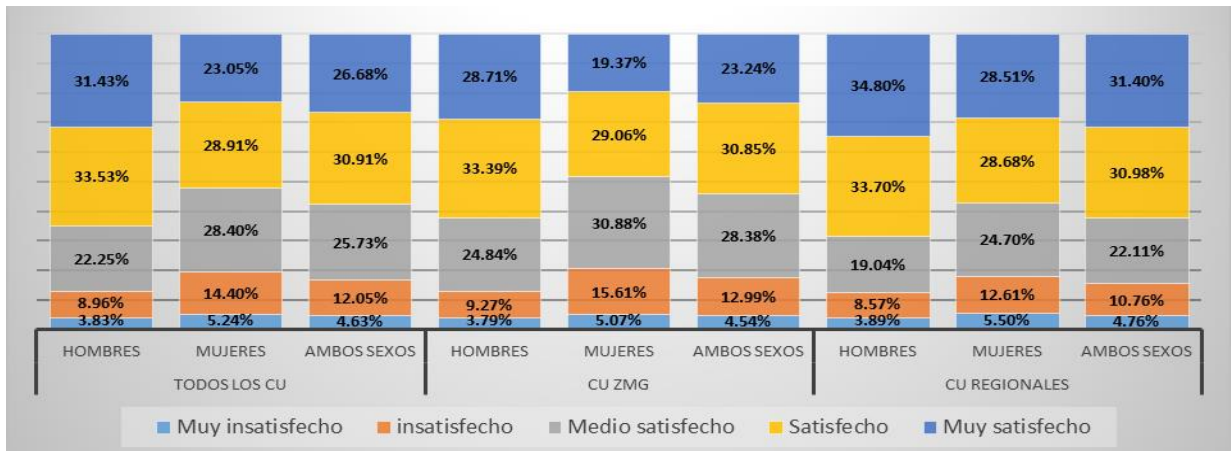
Figura 14. Percepción de la felicidad personal por sexo



Fuente: Elaboración propia

When analyzing students' satisfaction with their health, important differences can be observed (see figure 15 and test 13 in the annex). For example, men have a higher level of satisfaction than women. The percentages in the levels of very satisfied and satisfied are clearly higher (31.43% vs. 23.05% in all centers, 28.71% vs. 19.37% in the ZMG and 34.80% vs. 28.51% for regional centers; 33.53% vs. 28.91% for all university centers, 33.39% vs. 29.06% in the ZMG and 33.70% vs. 28.68% for regional centers, respectively). And at the lower satisfaction levels, the opposite happens: the percentages for men are clearly lower. Thus, regarding the average level of satisfaction, we have 22.25% vs. 28.40%, 24.84% vs. 30.88% and 19.04% vs. 24.70%, general, ZMG and regional, in that order; Regarding the dissatisfied level, 8.96% vs. 14.40% for all university centers, 9.27% vs. 15.61% in those of the ZMG and 8.57% vs. 12.61% for regionals; and regarding the very dissatisfied level, 3.83% vs. 5.24% for everyone, 3.79% vs. 5.07% in the ZMG and 3.89% vs. 5.50% for regionals. The reason why men feel more satisfaction with personal health may be due to the fact that women are culturally more careful with their health, they feel sick in the face of any imbalance; on the other hand, men usually do not complain and continue with their activities until they can no longer or realize that they have a disease or suffer from some disease, or perhaps they transfer the perception of their health to their mothers.

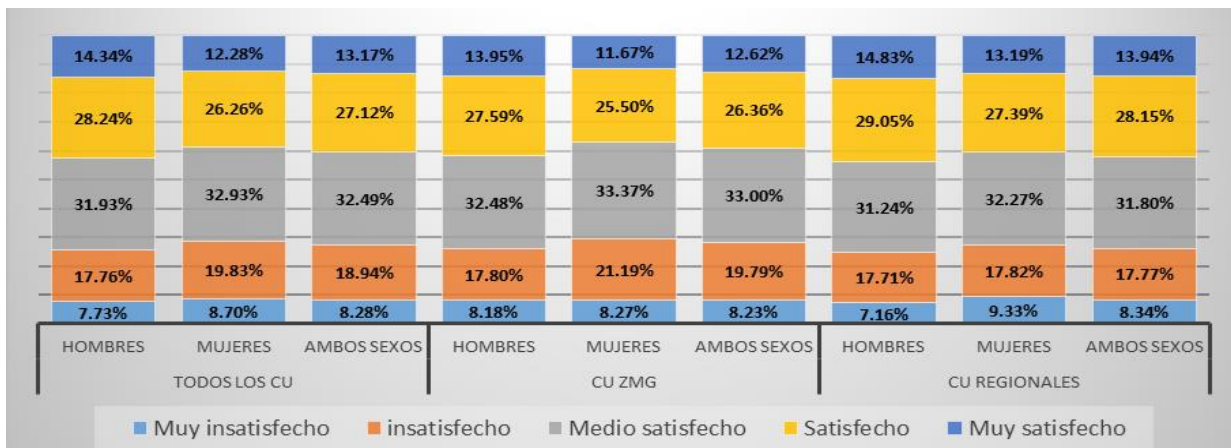
Figura 15. Satisfacción de la salud personal por sexo



Fuente: Elaboración propia

In figure 16, on the other hand, it can be observed that men have a higher level of satisfaction with respect to their personal economy than women: the percentages in the levels of very satisfied and satisfied are higher (in the very satisfied level they are registers 14.34% vs. 12.28% for all centers, 13.95% vs. 11.67% in ZMG centers, and 14.83% vs. 13.19% for regional university centers; and in the satisfied 28.24% vs. 26.26% for all , 27.59% vs. 25.50% in the ZMG and 29.05% vs. 27.39% at the regional level). While for the lower levels of satisfaction the behavior is opposite, and the percentages of men are clearly lower; thus, in the average level satisfied we have 31.93% vs. 32.93% for all, 32.48% vs. 33.37% in the ZMG, and 31.24% vs. 32.27% in the regional ones; at the dissatisfied level, 17.76% vs. 19.83%, 17.80% vs. 21.19% and 17.71% vs. 17.82%; and at the very dissatisfied level, 7.73% vs. 8.70%, 8.18% vs. 8.27% and 7.16% vs. 9.33%, general, AMG and regional, respectively (see annex, test 14). Note that there is a clear concordance between the average income level (see figure 4) and the level of satisfaction with respect to personal finances. In both cases, the situation for men is more favorable.

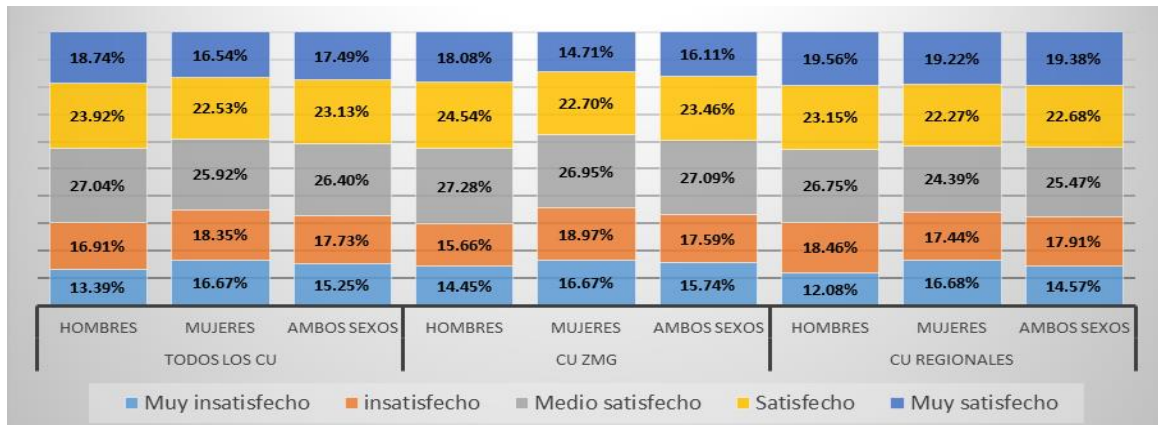
Figura 16. Satisfacción de la economía personal por sexo



Fuente: Elaboración propia

If we analyze the satisfaction of students with respect to their occupation, significant differences can also be observed (see figure 17), from which it can be deduced that men have a higher level of satisfaction than women, for higher levels; thus, at the very satisfied level, we have 18.74% vs. 16.54% for all CU, 18.08% vs. 14.71% in the CU of the ZMG, and 19.56% vs. 19.22% for the regional CU; Regarding the level of satisfaction, 23.92% vs. 22.53% for all CU, 24.54% vs. 22.07% in the CU of the ZMG, and 23.15% vs. 22.27% for the regional CU; and regarding the average level satisfied, 27.04% vs. 25.92% for all CU, 27.28% vs. 26.95% in the CU of the ZMG, and 26.75% vs. 24.39% for regional CU. While for the lowest level, very dissatisfied, we have that the percentages of men are lower, 13.39% vs. 16.67% for all CU, 14.45% vs. 16.67% in the CU of the ZMG, and 12.08% vs. 16.68% for the regional CU (see test 15 in the annex). In this sense, it is clear that although gender gaps in the world of work have been reduced, there are still notable differences in wages and job opportunities between men and women, even in more developed countries, so that the worst occupational satisfaction of women, it only reflects such a situation (Aponte, 2008).

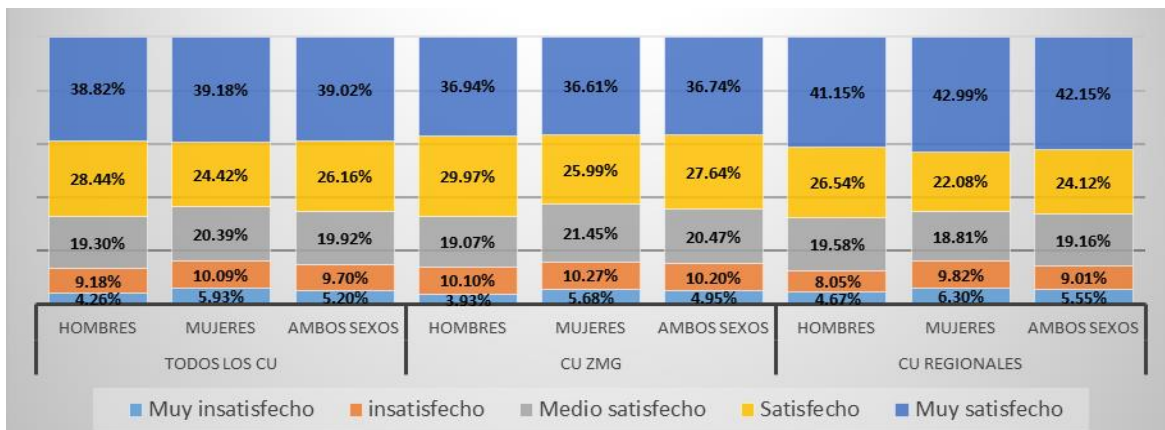
Figura 17. Satisfacción de la ocupación personal por sexo



Fuente: Elaboración propia

Now, figure 18 shows that men have a higher level of satisfaction with family relationships than women (see annex, test 16). A possible explanation for this is that in the traditional family environment success is still more valued in men, because, in the event that the woman, even if she is not academically and professionally successful, can ultimately get a good husband.

Figura 18. Satisfacción de las relaciones familiares por sexo

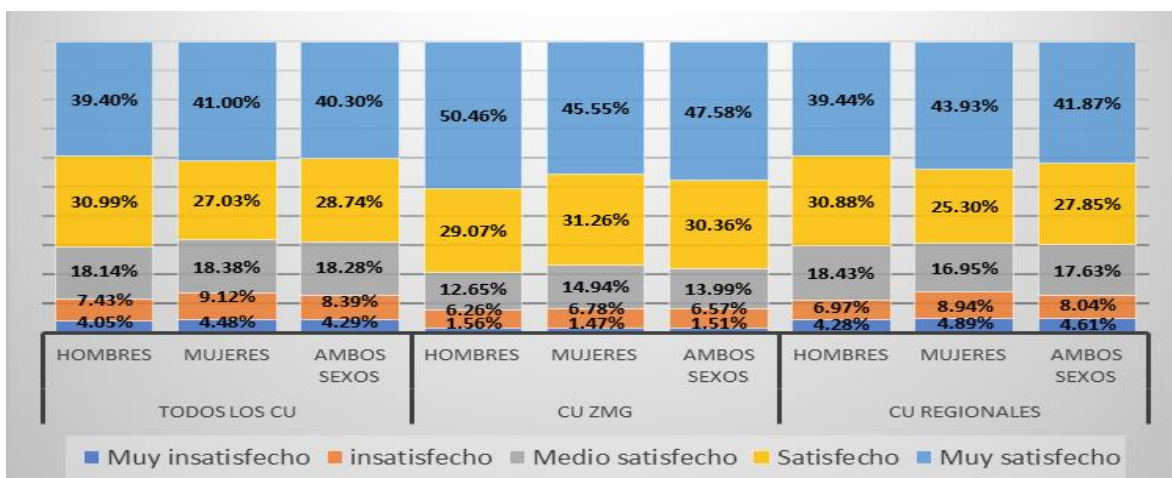


Fuente: Elaboración propia

Regarding satisfaction with friendly relationships, although the percentages by sex also show significant differences, there is no clearly distinguishable pattern of behavior. Even so, we can mention some of the proportions with greater contrast (see figure 19). If we consider all the university centers, in the satisfied level we have 30.99% in men vs. 27.03% in women; for those of the ZMG, regarding the level very satisfied, there is 50.46% in men vs. 45.55% in women; and for the regional ones, regarding the very satisfied level, 39.44%

are registered in men vs. 43.93% in women, and regarding the level of satisfaction, 30.88% in men vs. 25.30% in women (see annex, test 17). The above percentages show that the geographical issue affects the satisfaction of friendly relationships by sex. In the ZMG centers, men seem to have more satisfactory affective relationships, while in the regional university centers the opposite occurs, which suggests that the nature of friendly relationships by sex has a notorious ingredient that reflects the urban-rural contrast.

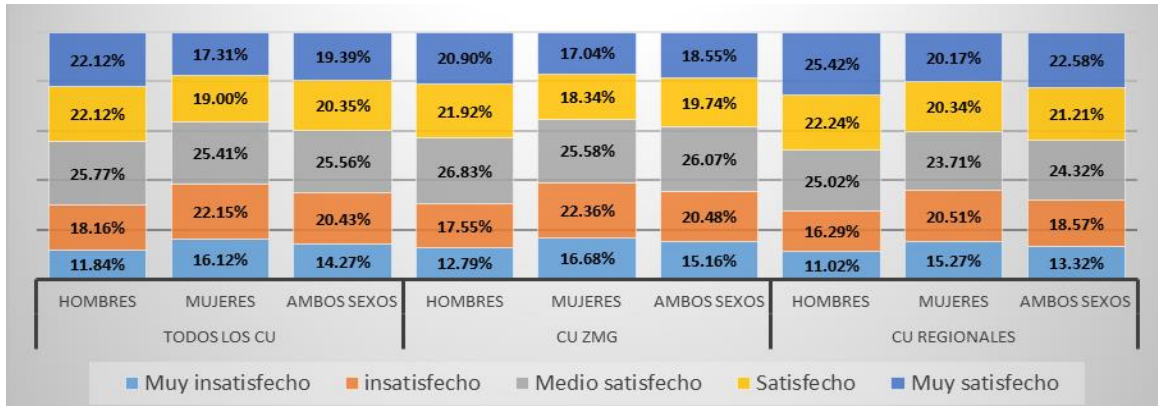
Figura 19. Satisfacción en las relaciones amistosas por sexo



Fuente: Elaboración propia

When studying student satisfaction with free time, significant differences can also be observed (see figure 20). Men have a higher level of satisfaction than women (see annex, test 18). The percentages in the levels of very satisfied, satisfied and half satisfied are higher in men. While for the lower levels of satisfaction the behavior is inverse, and the percentages of men are clearly lower. One possible explanation for the above results is that, traditionally, the family environment provides men with greater freedom of action and decision, while women are limited and to some extent repressed.

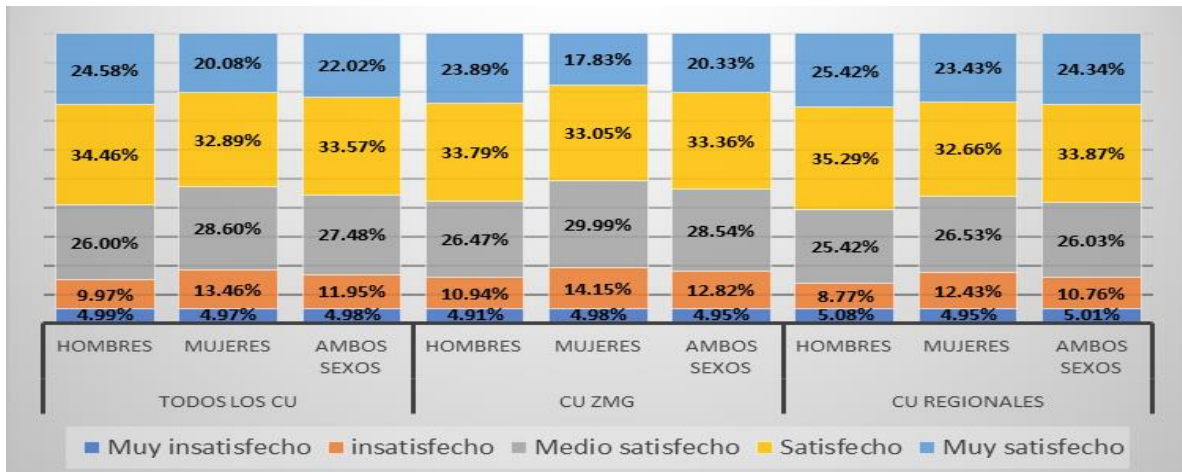
Figura 20. Satisfacción en el tiempo libre por sexo



Fuente: Elaboración propia

If we consider student satisfaction with the school environment, important differences are also noted (see figure 21). Men have a higher level of satisfaction than women; For example, the percentages in the levels of very satisfied and satisfied are clearly higher (24.58% vs. 20.08% for all centers, 23.89% vs. 17.83% in those of the ZMG and 25.42% vs. 23.43% for regional centers in regarding the level very satisfied; and 34.46% vs. 32.89% for all university centers, 33.79% vs. 33.05% in those of the ZMG and 35.29% vs. 32.66% for regional centers regarding the level satisfied). Regarding the low levels of satisfaction, the behavior is inverse, and the percentages of men are in most cases lower; thus, regarding the average level satisfied we have 26.00% vs. 28.60% for all centers, 26.47% vs. 29.99% in the ZMG university centers and 25.42% vs. 26.53% for regionals; Regarding the dissatisfied level, it is registered 9.97% vs. 13.46% for all centers, 10.94% vs. 14.15% in those of the ZMG and 8.77% vs. 12.43% for regionals; and as for the very dissatisfied level, finally, we have 4.99% vs. 4.97% for all university centers, 4.91% vs. 4.98% in those of the ZMG and 5.08% vs. 4.95% for regional university centers (see annex, test 19). It seems paradoxical that women, even having better school performance, feel less satisfied, perhaps because their performance is not recognized to the same extent and that of men is still valued more.

Figura 21. Satisfacción en el ambiente escolar por sexo



Fuente: Elaboración propia

Through the graphic, descriptive and inferential analysis presented above, which includes many variables of interest, from different fields, this work has proven its worth, since it reveals the current status of the differences between the sexes that exist in the UdeG at the undergraduate level. In addition to this, it exposes some probable reasons why these results are presented, which are subject to debate due to the general and exploratory nature of the work. However, the main limitation of this work lies in the subjective nature of the survey, since the results depend on the veracity and honesty with which the students answered the questions posed, that is, the answers were not validated and are subject to the perception of the students who answered the survey. Furthermore, the authors did not participate in the design and application of the survey; the available information was taken from a public database. In future work, it is advisable to focus the surveys applied to students on certain areas of interest, for example, school performance, and validate as far as possible the responses collected from students, and thus gain confidence and depth. Despite these limitations, the results obtained can be useful to design and implement educational policies that tend to reduce the gap between the sexes in the university environment and achieve a conducive environment in university life, where women and men coexist with equality, respect and harmony.

Conclusions

The statistical analysis carried out in this document shows that marked differences between the sexes still persist in different areas of university life. Also, thanks to the distinction between regional university centers and centers of the ZMG, it shows that there are some differences by sex between both contexts. In most of the items examined, there are still marked contrasts by sex, some more marked than others. For example, in academia, women showed higher average performance; Careers with clear inclinations towards both sexes were equally corroborated. In general demographic issues, the percentage of married and divorced women is higher, while the percentage of single and widowed men is higher; the percentage of mothers is higher than that of fathers among the students; men have a higher weekly income. Regarding sexual orientation, the percentage of bisexual women is higher than that of bisexual men, while the percentage of homosexual men is higher than that of homosexual women; Among heterosexuals, the percentages do not show significant differences by sex. On the other hand, men are more prone to addictions whether they are considered drugs, alcohol and tobacco. In terms of well-being, men say they are happier, as well as having a higher level of satisfaction in terms of their personal finances, their occupation, their family relationships, their free time and their relationships in the school environment.

Future lines of research

In the future, it is proposed to carry out an exhaustive comparative study by sex of academic performance by area of knowledge and by subject, taking advantage of the fact that the real grades of students are available by subject. The objective is to identify precisely in which disciplines and areas of knowledge there are significant differences between men and women (and the magnitude of such differences) and in which performance is very similar. The proposed research is possible by university center, since there is an important nucleus of subjects common to all careers.

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Rol de Contribución	Autor (es)
Conceptualización	Salvador Sandoval Bravo
Metodología	Salvador Sandoval Bravo, Víctor Hugo Gualajara Estrada Grado de contribución: igual
Software	No aplica
Validación	Salvador Sandoval Bravo, Víctor Hugo Gualajara Estrada, Pedro Luis Celso Arellano Grado de contribución: igual
Análisis Formal	Salvador Sandoval Bravo
Investigación	Salvador Sandoval Bravo
Recursos	Víctor Hugo Gualajara Estrada, Pedro Luis Celso Arellano Grado de contribución: igual
Curación de datos	Pedro Luis Celso Arellano
Escritura - Preparación del borrador original	Salvador Sandoval Bravo, Víctor Hugo Gualajara Estrada, Pedro Luis Celso Arellano Grado de contribución: igual
Escritura - Revisión y edición	Salvador Sandoval Bravo, Víctor Hugo Gualajara Estrada, Pedro Luis Celso Arellano Grado de contribución: igual
Visualización	Salvador Sandoval Bravo, Víctor Hugo Gualajara Estrada, Pedro Luis Celso Arellano Grado de contribución: igual
Supervisión	Víctor Hugo Gualajara Estrada, Pedro Luis Celso Arellano Grado de contribución: igual
Administración de Proyectos	Víctor Hugo Gualajara Estrada, Pedro Luis Celso Arellano Grado de contribución: igual
Adquisición de fondos	No aplica

Appendant

Tabla 2. Pruebas e hipótesis respecto a si existen o no diferencias significativas por sexo en la muestra de estudio

Prueba	Hipótesis	Todos	ZMG	Centros regionales
1	Ho: Los porcentajes por sexo respecto al estado civil no muestran diferencias significativas.	$\chi^2 = 13.180$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego rechazar Ho.	$\chi^2 = 2.983$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, no rechazar Ho.	$\chi^2 = 16.329$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.
2	Ho: Los porcentajes por sexo de quienes son padres no muestran diferencias significativas.	$\chi^2 = 12.678$; $\chi^2_{\alpha} = 3.841$; $\alpha = .05$. Entonces, rechazar Ho.	$\chi^2 = 6.042$; $\chi^2_{\alpha} = 3.841$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 7.068$; $\chi^2_{\alpha} = 3.841$; $\alpha = .05$. Luego, rechazar Ho.
3	Ho: Los porcentajes por sexo respecto al ingreso promedio semanal no muestran diferencias significativas.	$\chi^2 = 130.817$; $\chi^2_{\alpha} = 7.815$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 89.140$; $\chi^2_{\alpha} = 7.815$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 52.164$; $\chi^2_{\alpha} = 7.815$; $\alpha = .05$. Luego, rechazar Ho.
4	Ho: Las calificaciones promedio de las mujeres en todos los CU es menor o igual a la de los hombres.	$t = 9.220$; $t_{\alpha} = 1.646$; $\alpha = .05$. Luego, rechazar Ho.	$t = 5.821$; $t_{\alpha} = 1.646$; $\alpha = .05$. Luego, rechazar Ho.	$t = 7.289$; $t_{\alpha} = 1.646$; $\alpha = .05$. Luego, rechazar Ho.
5	Ho: Los porcentajes por sexo respecto al turno no muestran diferencias significativas.	$\chi^2 = 1.581$; $\chi^2_{\alpha} = 5.991$; $\alpha = .05$. Luego, no rechazar Ho.	$\chi^2 = 1.006$; $\chi^2_{\alpha} = 5.991$; $\alpha = .05$. Luego, no rechazar Ho.	$\chi^2 = 7.361$; $\chi^2_{\alpha} = 5.991$; $\alpha = .05$. Luego, rechazar Ho.

6	Ho: Los porcentajes por sexo respecto al tiempo que permanecen en la escuela no muestran diferencias significativas.	$\chi^2 = 30.215$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 23.322$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 10.309$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.
7	Ho: Los porcentajes por sexo respecto a la orientación sexual no muestran diferencias significativas.	$\chi^2 = 62.017$; $\chi^2_{\alpha} = 5.991$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 35.204$; $\chi^2_{\alpha} = 5.991$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 14.471$; $\chi^2_{\alpha} = 5.991$; $\alpha = .05$. Luego, rechazar Ho.
8	Ho: Los porcentajes por sexo de quienes ya han consumido drogas en todos los CU no muestran diferencias significativas.	$\chi^2 = 93.872$; $\chi^2_{\alpha} = 3.841$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 68.763$; $\chi^2_{\alpha} = 3.841$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 35.072$; $\chi^2_{\alpha} = 3.841$; $\alpha = .05$. Luego, rechazar Ho.
9	Ho: Los porcentajes por sexo respecto a la percepción del consumo a las drogas no muestran diferencias significativas.	$\chi^2 = 129.986$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 89.804$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 49.562$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.
10	Ho: Los porcentajes por sexo de quienes ya han consumido alcohol no muestran diferencias significativas	$\chi^2 = 28.708$; $\chi^2_{\alpha} = 3.841$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 18.006$; $\chi^2_{\alpha} = 3.841$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 13.727$; $\chi^2_{\alpha} = 3.841$; $\alpha = .05$. Luego, rechazar Ho.
11	Ho: Los porcentajes por sexo de quienes ya han consumido tabaco no muestran diferencias significativas.	$\chi^2 = 31.451$; $\chi^2_{\alpha} = 3.841$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 16.368$; $\chi^2_{\alpha} = 3.841$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 15.699$; $\chi^2_{\alpha} = 3.841$; $\alpha = .05$. Luego, rechazar Ho.

12	Ho: Los porcentajes por sexo de la percepción del nivel de felicidad de los estudiantes no muestran diferencias significativas.	$\chi^2 = 5.374$; $\chi^2_{\alpha} = 3.841$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 8.381$; $\chi^2_{\alpha} = 3.841$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 0.017$; $\chi^2_{\alpha} = 3.841$; $\alpha = .05$. Luego, no rechazar Ho.
13	Ho: Los porcentajes por sexo de la satisfacción de la salud personal de los estudiantes no muestran diferencias significativas.	$\chi^2 = 97.654$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 66.120$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 30.260$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.
14	Ho: Los porcentajes por sexo respecto a la satisfacción de los estudiantes por su economía personal no muestran diferencias significativas	$\chi^2 = 10.697$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 8.649$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, no rechazar Ho.	$\chi^2 = 4.817$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, no rechazar Ho.
15	Ho: Los porcentajes por sexo respecto a la satisfacción de los estudiantes en cuanto a su ocupación personal no muestran diferencias significativas.	$\chi^2 = 15.656$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 12.923$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 9.611$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.
16	Ho: Los porcentajes por sexo en relación a la satisfacción de los estudiantes respecto a sus relaciones familiares no muestran diferencias significativas.	$\chi^2 = 16.620$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 10.761$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 9.595$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.
17	Ho: Los porcentajes por sexo en relación a la satisfacción de los estudiantes respecto a	$\chi^2 = 12.758$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$.	$\chi^2 = 4.892$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$.	$\chi^2 = 12.418$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.

	sus amistades no muestran diferencias significativas.	.05. Luego, rechazar Ho.	.05. Luego, no rechazar Ho.	
18	Ho: Los porcentajes por sexo en relación a la satisfacción de los estudiantes respecto a su tiempo libre no muestran diferencias significativas.	$\chi^2 = 47.763$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 28.419$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 20.580$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.
19	Ho: Los porcentajes por sexo en relación a la satisfacción de los estudiantes respecto al ambiente escolar no muestran diferencias significativas.	$\chi^2 = 28.739$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 22.369$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, rechazar Ho.	$\chi^2 = 9.037$; $\chi^2_{\alpha} = 9.488$; $\alpha = .05$. Luego, no rechazar Ho.

Fuente: Elaboración propia