UNIVERSITY OF MONTEMORELOS

Doctorate in Administration

Project of Methodological Workshop III

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1. Describa en tablas y gráficos cinco variables métricas y cinco variables nominales.

Tablas y gráficos de variables matriciales

En la Tabla 1 se puede observar que el 16.5% de los encuestados tenían veintitrés años.

Edad

		Frecuencia	Por ciento	Valida por ciento	Acumulativa por ciento
Valid	21	2	1.6	1.7	1.7
	22	7	5.6	6.1	7.8
	23	19	15.1	16.5	24.3
	24	12	9.5	10.4	34.8
	25	11	8.7	9.6	44.3
	26	9	7.1	7.8	52.2
	27	9	7.1	7.8	60.0
	28	4	3.2	3.5	63.5
	29	6	4.8	5.2	68.7
	30	11	8.7	9.6	78.3
	31	7	5.6	6.1	84.3
	32	5	4.0	4.3	88.7
	33	2	1.6	1.7	90.4
	34	1	.8	.9	91.3
	35	1	.8	.9	92.2
	36	1	.8	.9	93.0
	39	1	.8	.9	93.9
	41	1	.8	.9	94.8
	42	2	1.6	1.7	96.5
	44	3	2.4	2.6	99.1
	46	1	.8	.9	100.0

	Total	115	91.3	100.0
Missing	System	11	8.7	
Total		126	100.0	

In Table 2, it can be observed that 60.8 percent (*n*=73) of the participants have no dependent relatives, while 17.5% (N=21) have one dependent, 14.2% (*n*=17) have two dependents, 5.6% (*n*=3) have three dependents and 1.6% (N=4) have four dependents.

Table 2

Dependent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	73	57.9	60.8	60.8
	1	21	16.7	17.5	78.3
	2	17	13.5	14.2	92.5
	3	7	5.6	5.8	98.3
	4	2	1.6	1.7	100.0
	Total	120	95.2	100.0	
Missing	System	6	4.8		
Total		126	100.0		

In Table 3, it can be observed that 60.8 of the respondents have no members supporting the household.

Table 3

Members Supporting the House

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	73	57.9	60.8	60.8
	1	21	16.7	17.5	78.3
	2	17	13.5	14.2	92.5
	3	7	5.6	5.8	98.3
	4	2	1.6	1.7	100.0
	Total	120	95.2	100.0	
Missing	System	6	4.8		
Total		126	100.0		

In Table 4, it can be observed that 55.6% of the respondents are males and 44.4% are females.

Table 4

Gender

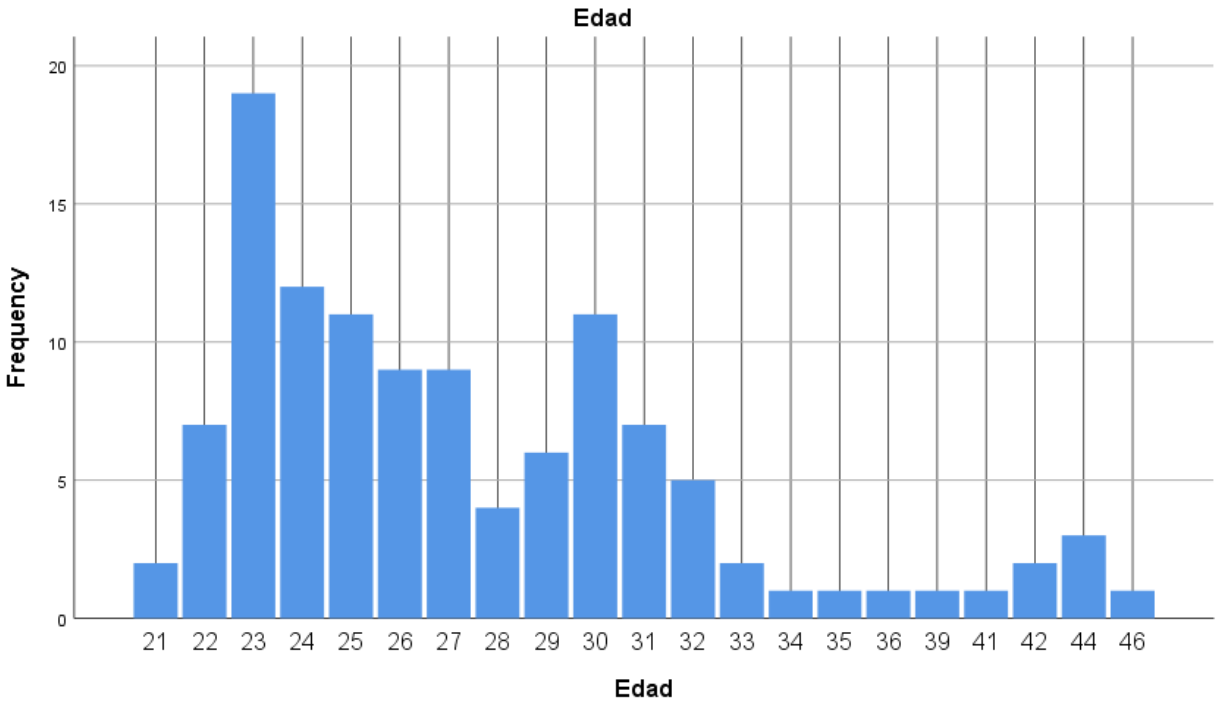
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	25	55.6	55.6	55.6
	Female	20	44.4	44.4	100.0
	Total	45	100.0	100.0	

In Table 5, it can be observed that 57.8% of the respondents have internal residencies, while 42.2% have external residencies.

Table 5

Residencia

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Interno	26	57.8	57.8	57.8
	Externo	19	42.2	42.2	100.0
	Total	45	100.0	100.0	


Edad
Frequency
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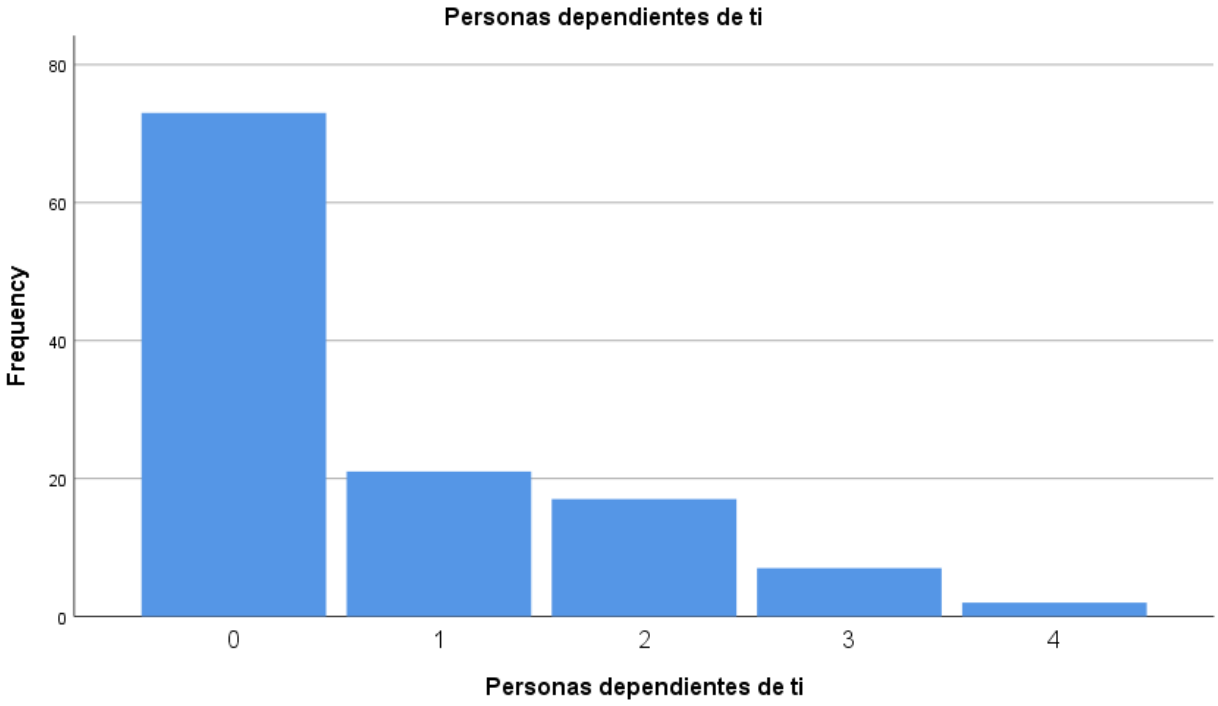
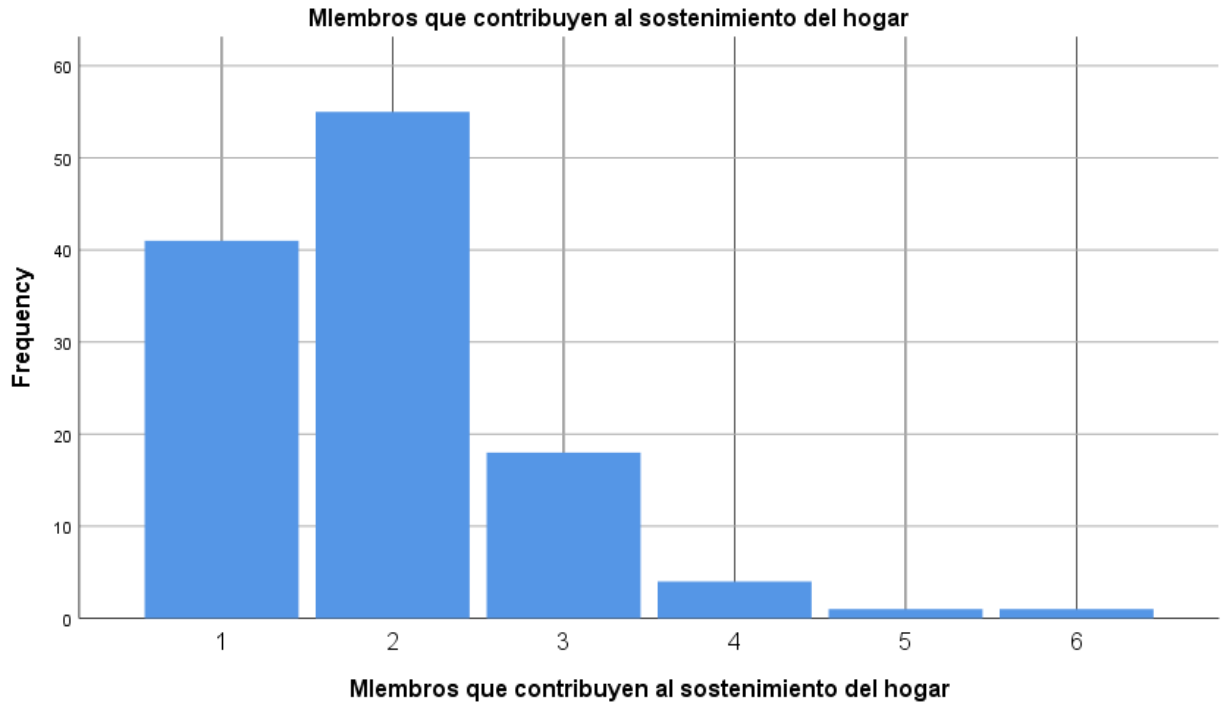
15
10
5
0
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 39 41 42 44 46
Edad


Personas dependientes de ti
Frequency
80
60
40
20
0
0 1 2 3 4
Personas dependientes de ti


Mlembros que contribuyen al sostenimiento del hogar
Frequency
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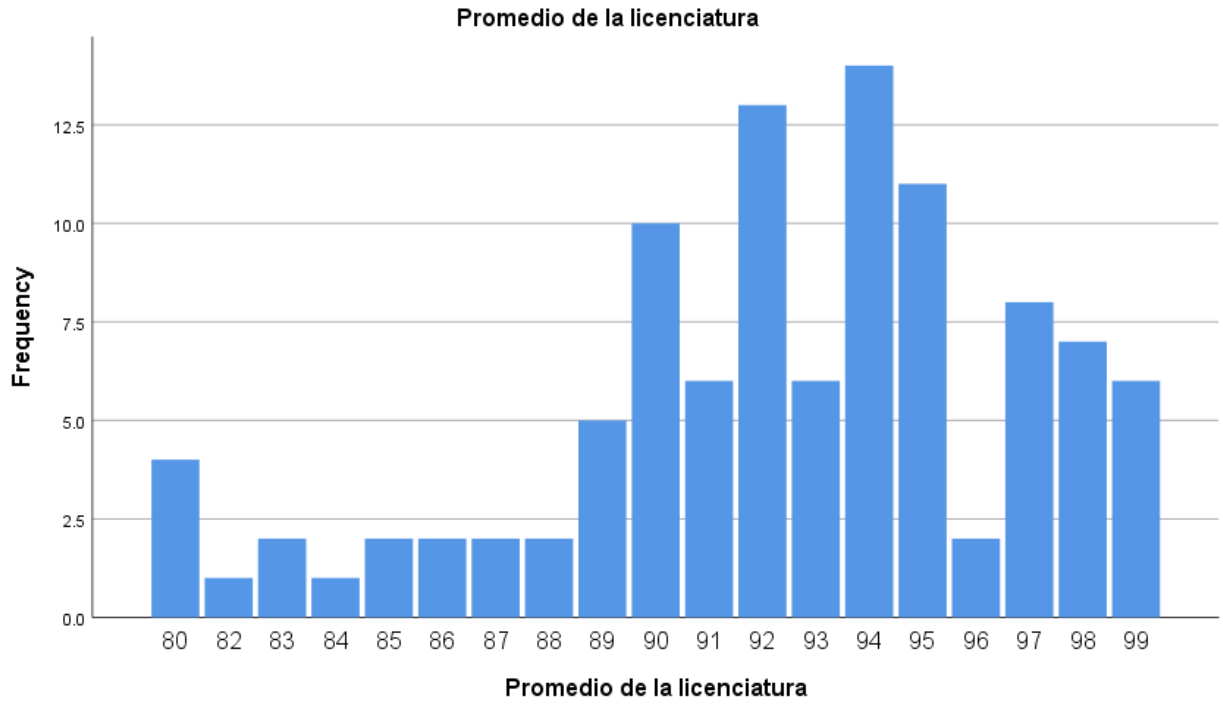
50
40
30
20
10
0
1
2
3
4
5
6
Mlembros que contribuyen al sostenimiento del hogar


Promedio de la licenciatura
Frequency
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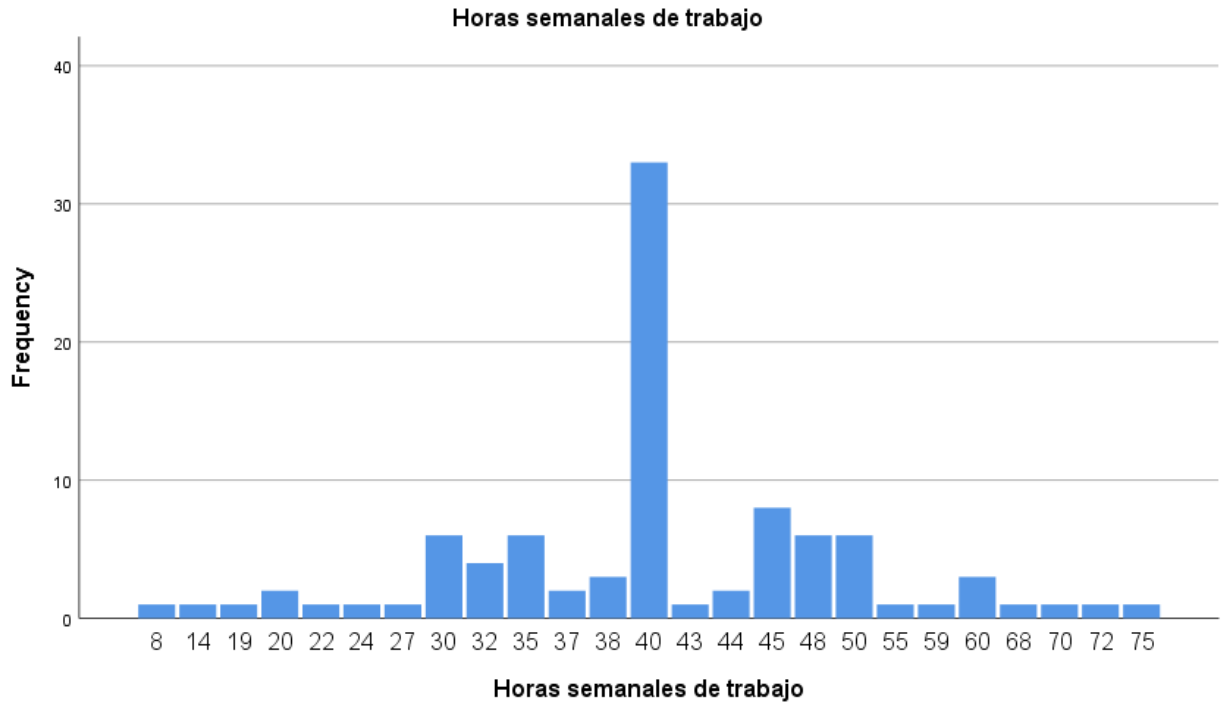
10.0
7.5
5.0
2.5
0.0
80
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
Promedio de la licenciatura



Nominal Variables Tables and Charts

In Table 6, it can be observed that 47.8% of the respondents were males and 52.4% were females.

Table 6

Genero

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Masculino	60	47.6	47.6	47.6
	Femenino	66	52.4	52.4	100.0
	Total	126	100.0	100.0	

In Table 7, it can be observed that 57.1% (72) of respondents were single, 42.1% (53) were married and .8% (1) were divorced.

Table 7

Estado civil

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Soltero	72	57.1	57.1	57.1
	Casado	53	42.1	42.1	99.2
	Divorciado	1	.8	.8	100.0
	Total	126	100.0	100.0	

In Table 8, it can be observed that 54.8% (69) of respondents were living in rented housing, 15.1% (19) lived in family property, still being paid, 27.0% (34) lived in family property, paid and 3.2% (4) lived in borrowed property.

Table 8

Alojamiento

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rentada	69	54.8	54.8	54.8
	Propiedad familiar, aun se está pagando	19	15.1	15.1	69.8
	Propiedadfamiliar, pagada	34	27.0	27.0	96.8
	Prestada	4	3.2	3.2	100.0
	Total	126	100.0	100.0	

In Table 9, it was observed that 97.6% of respondents had home phones, while 2.4% had no home phones.

Table 9

Telefono de casa

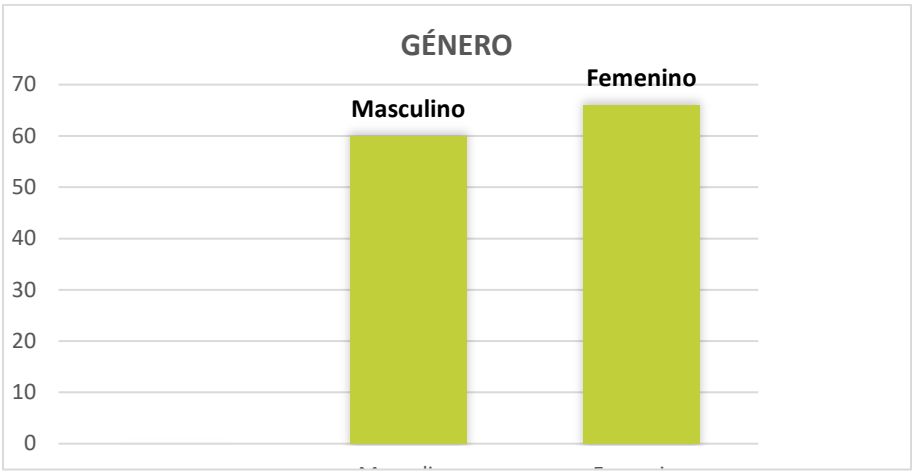
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Si	123	97.6	97.6	97.6
	No	3	2.4	2.4	100.0
	Total	126	100.0	100.0	

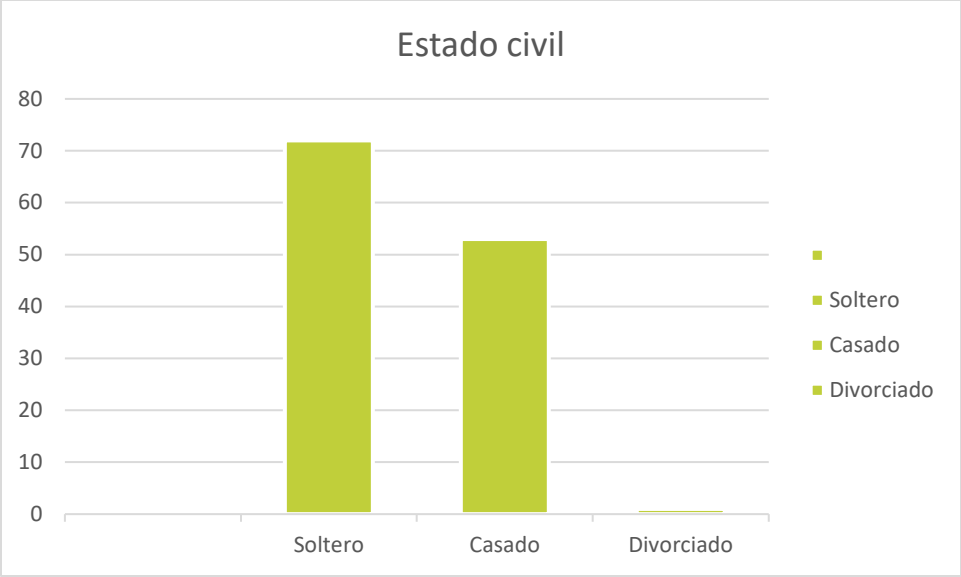
In Table 10, it was observed that 88.0% of respondents had computers, while 12% had no computers.

Table 10

Computadoras

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SI	110	87.3	88.0	88.0
	No	15	11.9	12.0	100.0
	Total	125	99.2	100.0	
Missing	System	1	.8		
Total		126	100.0		




Estado civil
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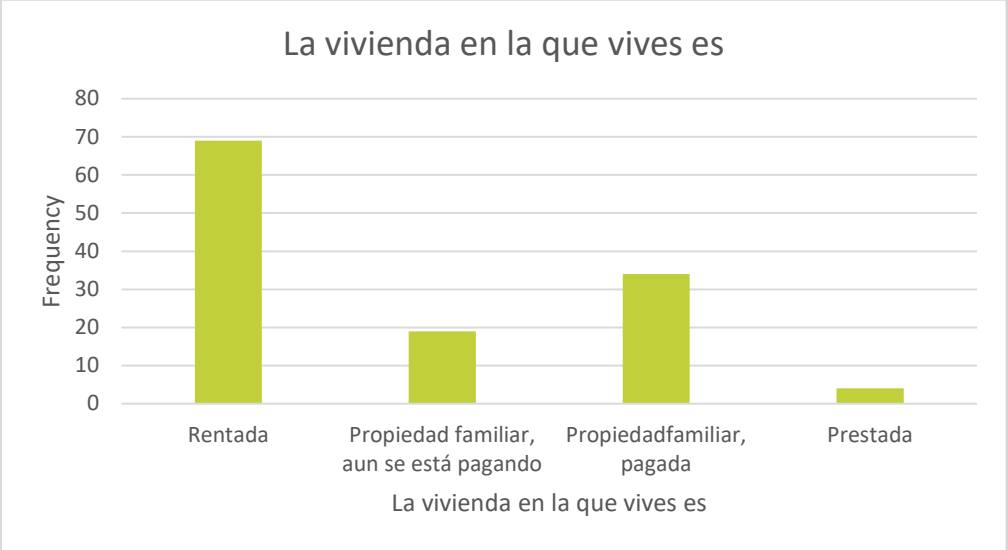
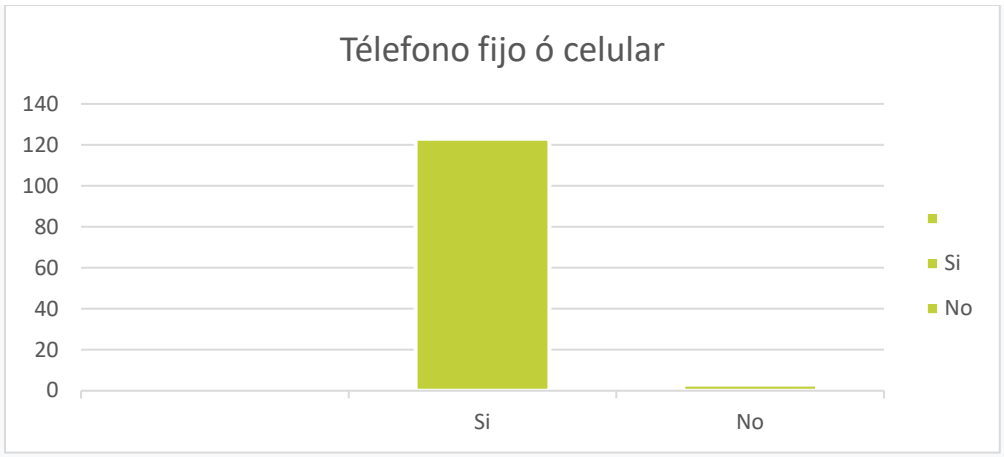
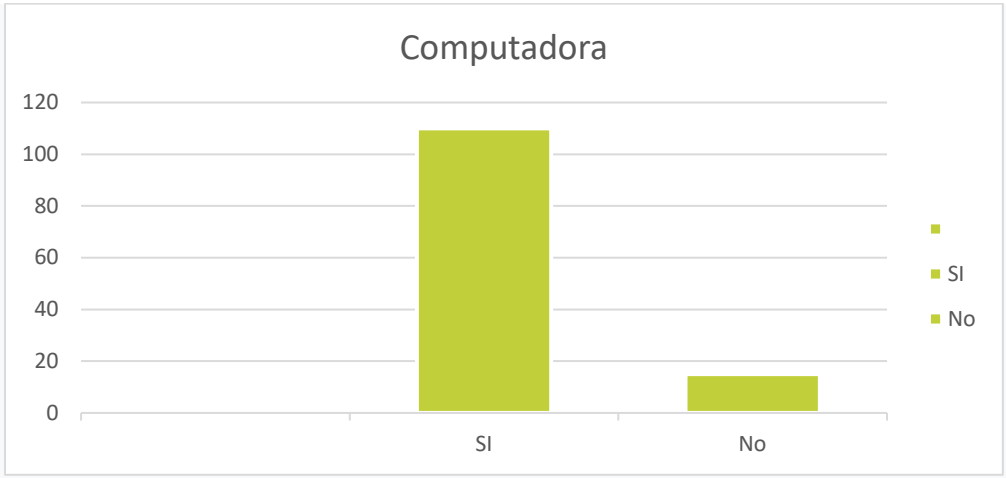
60
50
40
30
20
10
0
Soltero
Casado
Divorciado
Soltero
Casado
Divorciado


La vivienda en la que vives es
Frequency
80
70
60
50
40
30
20
10
0
Rentada
Propiedad familiar, aun se está pagando
Propiedadfamiliar, pagada
Prestada
La vivienda en la que vives es





2. Four Cross-tabulation Tables

In Table 11, it can be observed that 53.3% of male respondents lived in rented housing, 15.0% lived in family property, still being paid, 26.7% lived in family property, paid and 5.0% lived in borrowed housing. 56.1% of female respondents rented housing, 15.2% lived in family, still been paid, 27.3% lived in family, paid and 1.5% lived in borrowed housing.

Table 11

Gender * Housing Cross-tabulation

			Rentada	Propiedad familiar, aun se está pagando	Propiedadfamiliar, pagada	Prestada	Total
v2	Masculino	Count	32	9	16	3	60
		Expected Count	32.9	9.0	16.2	1.9	60.0
		% within v2	53.3%	15.0%	26.7%	5.0%	100.0%
	Femenino	Count	37	10	18	1	66
		Expected Count	36.1	10.0	17.8	2.1	66.0
		% within v2	56.1%	15.2%	27.3%	1.5%	100.0%
Total		Count	69	19	34	4	126
		Expected Count	69.0	19.0	34.0	4.0	126.0
		% within v2	54.8%	15.1%	27.0%	3.2%	100.0%

In Table 12, it was observed that 100% of males have home phones and 97.6% of females have home phones, while 2.4% had no home phones.

Table 12

Gender * Home Phone Cross-tabulation

			Si	No	Total
v2	Masculino	Count	60	0	60
		Expected Count	58.6	1.4	60.0
		% within v2	100.0%	0.0%	100.0%
	Femenino	Count	63	3	66
		Expected Count	64.4	1.6	66.0
		% within v2	95.5%	4.5%	100.0%
Total		Count	123	3	126
		Expected Count	123.0	3.0	126.0
		% within v2	97.6%	2.4%	100.0%

In Table 13, it was observed that 55.0% of male respondents were single, 45.0% were married, and none were divorced. On the other hand, 59.1% of females were single, 39.4% were married, and 1.5% were divorced.

Table 13

Gender* Marital Status Cross-tabulation

			v4			
			Soltero	Casado	Divorciado	Total
v2	Masculino	Count	33	27	0	60
		Expected Count	34.3	25.2	.5	60.0
		% within v2	55.0%	45.0%	0.0%	100.0%
	Femenino	Count	39	26	1	66
		Expected Count	37.7	27.8	.5	66.0
		% within v2	59.1%	39.4%	1.5%	100.0%
Total		Count	72	53	1	126
		Expected Count	72.0	53.0	1.0	126.0
		% within v2	57.1%	42.1%	0.8%	100.0%

In Table 14, it is observed that 89.8% of males have computers and 10.2% have no computers. 86.4% of females have computers and 13.6% did not have computers.

Table 14

Gender* Computer Cross-tabulation

			v11.2		
			SI	No	Total
v2	Masculino	Count	53	6	59
		Expected Count	51.9	7.1	59.0
		% within v2	89.8%	10.2%	100.0%
	Femenino	Count	57	9	66
		Expected Count	58.1	7.9	66.0
		% within v2	86.4%	13.6%	100.0%
Total		Count	110	15	125
		Expected Count	110.0	15.0	125.0
		% within v2	88.0%	12.0%	100.0%

3. Make three examples of correlation.

H_0. There is no significant relationship between con1 (knowledge1) and con2 (knowledge2).

H_1. Using the Parson Correlation test, it was found that a relationship exists between con1 and con2. They have a moderate relationship of .291 and a *P* value of *.001*. Therefore, the null hypothesis, which says, that there was no relationship between con1 and con2 was rejected.

Table 15

Correlations

		con1	con2
con1	Pearson Correlation	1	.291**
	Sig. (2-tailed)		.002
	N	118	111
con2	Pearson Correlation	.291**	1
	Sig. (2-tailed)	.002	
	N	111	111

H_0. There is no significant relationship between act1 and act2.

H_1. Using the Parson Correlation test, it was discovered that a relationship exists between act1 and act2. They have a relationship of .300 and a *P* value of *.098*. Therefore, the null hypothesis, which says, that there was not relationship between act1 and act2 was rejected.

Table 16

Correlations

		act1	act2
act1	Pearson Correlation	1	.098
	Sig. (2-tailed)		.300
	N	120	113
act2	Pearson Correlation	.098	1
	Sig. (2-tailed)	.300	
	N	113	113

H_0. There is no a significant relationship between act2 and hab2.

H_1. In using the Parson Correlation Test, it was found that correlation exists between act1 and hab2. They have a relationship of .711 and a *P* value of *.000.* Therefore, the null hypothesis, which says that there was no relationship between act2 and hab2 was rejected.

Table 17

Correlations

		act2	hab2
act2	Pearson Correlation	1	.711**
	Sig. (2-tailed)		.000
	N	113	112
hab2	Pearson Correlation	.711**	1
	Sig. (2-tailed)	.000	
	N	112	115

4. Form three simple regression lines.

H_0. Knowledge1 (con1) is not a significant predictor of Skills1 (hab1).

H_1. The value of R^2 adjusted equal .571, which indicates that the variable explained 57.1% of variance of the dependent variable. The *F* value is less than .05 equal to154.264 and a P value equal to .000. As it can be observed that the *P* value is less than .05, therefore it is positive and significant lineal correlation, hence, the null hypothesis was rejected.

The equation is as follows: $B_0 = .510$, $B_1 = .842$.

H_0. Knowledge2 (con2) is not a significant predictor of skills2 (hab2).

H_1. The value of R^2 adjusted equal .445, which indicates that the variable explained 44.5% of variance of the dependent variable. The *F* value is equal 88.437 and a *P* value equal to .000.

As it can be observed the *P* value is less than .05, therefore it is positive and significant linear correlation, hence, the null hypothesis is rejected.

The equation is as follows: B_0 = .002, B_1= .889.

H_0. Skills2 (hab2) is not a predictor of satisfaction with the UNAV.

The value of R^2 adjusted equal .017, which indicates that the variable explained 1.7% of variance of the dependent variable. The *F* value is equal 2.819 and a P value equal to .096. As it can be observed, the *P* value is greater than .05. Therefore, it is negative linear correlation; hence, the null hypothesis is accepted.

The equation is as follows: B_0 = 90.502, B_1=6.864.

5. Elaborate two examples of multiple regression formed by the following constructs: (a) knowledge 1 - Skills 1 - Attitudes 1 as predictors of satisfaction with the UNAV, (b) Knowledge 2 - skills 2 - attitudes 2 as predictors of professional performance.

H_0. Knowledge1 (con1), skills1 (hab1) and attitudes1 (act1) are not significant predictors of satisfaction with the UNAV.

H_1. The value of R^2 adjusted equal .383, which indicates that the variable explained 38.3% Of variance of the dependent variable. The *F* value is equal 23.341 and a *P* value equal to .000. As it can be observed the *P* value is less than .05, therefore it is positive and significant linear correlation; hence, the null hypothesis is rejected.

The equation is as follows: B_0 = .27.421, B_1= .6.352, B_2=8.721, B_3=10.626.

H_0. Knowledge2 (con2), skills2 (hab2) and attitudes2 (act2) are not predictors of professional performance.

H_1. The value of R^2 adjusted equal .107, which indicated that the variable explained 10.7% of variance of the dependent variable. The *F* value is equal 5.167 and a *P* value equal to .002. As it can be observed, the *P* value is less than .05, therefore, it is a positive and significant lineal correlation; hence, the null hypothesis is rejected. Additionally, the results also revealed skills1 was the best predictor of professional performance, with a score of β=.250.

The equation is as follows: $B_0 = 4.025$, $B_1 = -1.809$, $B_2 = 3.462$, $B_3 = 4.207$.

6. Three examples of *t* test for independent samples.

H_0. There is no difference of perception between gender and satisfaction with the UNAV.

The Levene Test indicated that there is equal variance (*P*=.175), so that the *t* is equal to .032, *df* is equal to 113 and *P*=.974. Hence, the null hypothesis is accepted because the *P* value was higher than .05. The arithmetic mean for male was 115.01 and for female 115.12.

H_0. There is no significant difference between v2 (gender) and con1 (knowledge1).

The Levene Test shows that there is equal variance (*P*=.880), so that the *t* is equal to .139, *df* is equal to 116 and *P*=.890. Therefore, the null hypothesis is accepted because the *P* value is greater than .05. The arithmetic mean for male was 3.23 and for female 3.24.

H_0. There is significant difference between v2 (gender) and hab1 (skills1).

The Mann-Whitney U is equal to 1703.500 and a *P* equal to .612. Therefore, the null hypothesis was accepted. The mean ranks for males was 58.89, and for females 62.11.

7. Three examples of *t* tests for paired samples.

H_0. There is no significant difference of perception between con1 and con2.

The paired sample *t* test revealed that con1 had an arithmetic mean of 3.24 and con2 had an arithmetic mean of 3.18. The *t* value was equal to 1.139, *df* equal to 110 and a *P* value of .257. Therefore, the null hypothesis is accepted.

H_0. There is no significant difference between act1 and act2.

The Wilcoxon Test showed that act1 and act2 have a sum of rank 1712.50 and 3852.50. The *Z* value -3.424 and a P value of .001. Therefore, the null hypothesis is accepted.

H_0. There is no significant difference between hab1 and hab2.

The Wilcoxon Test showed that hab1 and hab2 have a sum of rank .954.50 and paired 4823.50. The *Z* value was -6.015 and a *P* value of .000. Therefore, the null hypothesis is accepted.

8. Three examples of ANOVA.

H_0. There is no significant difference between the groups in v10 and knowledge2 (con2)

The one-way ANOVA test showed results of *F* equal to .436 and a *P* equal to .728. Therefore, the null hypothesis is accepted. The arithmetic mean for rented housing was

3.17. The arithmetic mean for mortgaged housing was 3.19, for owned housing 3.16 and for borrowed housing 3.52.

H_0. There is no significant difference between the groups in v10 and act2.

The Kruskal Wallis test showed an X^2 equal to .539, and a *P* equal to .910. Therefore, the null hypothesis is accepted. The mean rank for rented housing was 55.07, mortgaged housing was 58.71, those who owned their housing was 60.17 and borrowed housing was 57.13.

H_0. There is no significant difference between the groups in v10 and knowledge1 (hab2)

The one-way ANOVA test showed results of *F* equal to .700 and a *P* equal to .554. Therefore, the null hypothesis is accepted. The arithmetic mean for rented housing was 5.54. The arithmetic mean for mortgaged housing was 3.59, for owned housing 3.63 and for borrowed housing 3.78.

9. Three examples of chi-square tests.

H_0. Gender (v2) is not dependent on v4.

The Chi-Square test showed a value of X^2 equal to 1.236, *P* equal to .539 and a Phi equal to .539. Therefore, the null hypothesis is accepted.

H_0. Gender (v2) is not dependent on v40.

The Chi-Square test showed a value of X^2 equal to 3.320, *P* equal to .190 and a Phi Equal to .190. Therefore, the null hypothesis is accepted.

$H_{0.}$ Gender (v2) is not dependent on v41.

The Chi-Square test showed a value of X^2 equal to 5.653, *P* equal to .227 and a Phi equal to .227. Therefore, the null hypothesis is accepted.