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# Guatemalan Journal of Psychology



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## Editorial

The Department of Postgraduate Studies began its activities coincidentally with the start of the current century. The first program was the master's in social psychology and political Violence (2000), and years later, the Master's and Doctorate in Psychology were established (2002). The development of these programs paved the way for the formation of the Department of Postgraduate Studies. These various programs were the result of efforts by professionals from the School of the University of San Carlos of Guatemala (USAC) and other universities.

In 2019, the Academic Council of the Department of Postgraduate Studies reviewed and approved the Agreement (Agreement No. and date), subsequently sending it to the Board of Directors of the School, who proceeded to review and approve it (Agreement No. and date). This agreement proposed that students from the School of Psychological Sciences who had completed the undergraduate curriculum could enroll in one of the master's programs offered by the Department of Postgraduate Studies. Upon completing their master's studies and obtaining their degree, they would also be eligible for their undergraduate degree. This represented the fourth graduation modality for students of the School of Psychological Sciences.

By that time, in 2019, the Department of Postgraduate Studies had the following active and System of Postgraduate Studies-approved master's programs: Master's in social Analysis of Disability (2015), master's in forensic psychology (2017), Master's in Comprehensive Care for Addictive Behaviors (2018), and the master's in human and organizational management (2019). Subsequently, the Master's in Psychosocial Analysis of Violence and the Master's in Clinical Psychology and Psychotherapy (2021) were introduced.

In this context, the Department of Postgraduate Studies, among other initiatives, promoted the creation of the Guatemalan Journal of Psychology, knowing that the practice of writing in the country is a significant challenge, given the educational data of recent years. According to the document "Survey of Research and Innovation in the Republic of Guatemala" (UNESCO, 2017), despite the growth in the Human Development Index over the last 54 years, Guatemala remains a country with high inequality. Issues such as insecurity, poverty, low educational quality, malnutrition, especially among indigenous children in rural areas, preventable mortality, natural disasters, and the risks of climate change are threats that the state has been unable to address due to a culture of impunity and weak governance, affecting rural and indigenous areas, women, and youth.

Education data does not present a better scenario. The state's investment in education (2.8% of GDP) represents only half of what UNESCO recommends (3.2%), and it is one-third of the average in Latin America for higher education. Only 1.6% of sixth-grade primary students in Guatemala surpassed level IV in natural science tests in Latin America. Data from the Ministry of Education of Guatemala regarding high school graduates show poor performance in reading and mathematics.

In 2017, the number of scientists per million inhabitants was 16,262 times smaller than the Latin American and developed countries' average. To overcome this obstacle, the Guatemalan scientific community should grow 45 times larger to have an influence in various fields of knowledge in the country.

This situation is a consequence of the low number of undergraduate and postgraduate, each year, the limited number of postgraduate programs offered in the country, and the absence of regulatory frameworks to ensure academic excellence, all of which were true for the year of this publication.

The percentage of undergraduate and master's graduates among the population over 25 years old is 6.5% and 0.3%, respectively. From this population segment emerges the human resources dedicated to academic activities, research, and the production of scientific articles, which, for Guatemala, was only 11 per million inhabitants compared to Chile, which is 45 times higher. The vast majority, 90% of Guatemala's scientific articles, are published in collaboration with other countries.

Precisely because this scenario is not promising, it is considered that writing scientific articles constitutes a challenge that must be faced and, above all, resolved. The production of scientific articles requires a culture of reading and writing, skills that higher education enhances, including critical analysis, contextualization, and, most importantly, ethical and political perspectives inherent to a public and autonomous university. It is expected that a significant number of graduates from the university's undergraduate and postgraduate programs will dedicate themselves to this task, an aspiration of the administration of the School of Psychological Sciences and those of us who make up the Department of Postgraduate Studies.

To achieve this, efforts must be redoubled to reduce the backlog of undergraduate graduates, improve the quality of research competencies at the undergraduate level, and ensure that postgraduate programs contribute to this effort within their areas of expertise. Students must also take up the challenge by engaging in more reading and writing, showing commitment and consistency.

Publishing the first issue of the Guatemalan Journal of Psychology from the Department of Postgraduate Studies and the School of Psychological Sciences is a promising step, just as it has been from other areas. A group of psychology professionals and those from related fields, along with graduates of the

Department's master's programs, have been invited to collaborate on this inaugural issue. The response has been positive, and thus, you hold in your hands the result of several years of work to establish the institutional framework that would support this effort both administratively and academically.

The work of the members of the Academic Council of the Department, who conducted critical analysis and, most importantly, made proposals that shaped the path of development and invited those who submitted articles for review, has been invaluable. Most of the writers cooperatively reviewed, modified, and expanded the articles that are included in this first volume, number one, for the year 2022. The articles that are still pending publication will be considered for the next volume.

The purpose of all this effort, the publication itself, goes beyond ostentation; it is intended to be in line with the words of the Secretary-General of the University Students Association, Oliverio Castañeda de León (May 22, 1978): "...the struggle for the right of Guatemalan youth to education is the reason for our university work."

For this reason, this effort must translate into a steppingstone to be further reinforced, so that it can be traversed by university students as part of their right, opportunity, and responsibility for public higher education in the country. This steppingstone must be strong enough to withstand the challenges and obstacles mentioned earlier, broad enough to accommodate all ideas that, while respecting rights, contribute to the development of psychology and, therefore, the country. Therefore, the effort will continue to address these challenges, inviting master's program students to join this endeavor.

In conclusion, we extend our gratitude to everyone who, with their support and commitment, has contributed to the completion of this first issue of the Guatemalan Journal of Psychology.



## Proposal for improving the reliability, validity, and impartiality of the performance evaluation, and its classification by means of the 9-box system by statistical methodology

*Propuesta de mejora de fiabilidad, validez e imparcialidad de la evaluación de desempeño y su clasificación en el sistema de 9 cajas, mediante metodología estadística*

María del Carmen Muñoz Pineda   
Universidad Francisco de Vittoria

MBA

mariam.p@psicousac.edu.gt

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### Abstract

Talent Management is essential within an organization, its success or failure depends on its collaborators. Reliability, validity and security on the interpretation of its results are essential to make decisions about talent and statistics is the ideal means to provide it. In this study, the statistical methodology applied in psychometric and educational evaluation is adapted for its analysis. Evaluate the reliability and validity of the instrument used to evaluate using Cronbach's and Spearman Brown's Alpha tests; detect evaluation differences among evaluators using Mood test, which indicates the need to empower evaluators on how to evaluate. And the detection of the influence of the sociodemographic variables on the assigned scores, which made it possible to see the need to design a scale to objectively categorize the performance of the evaluated workers on the horizontal axis of a nine-box system. Leads to the conclusion that the credibility it gives to the performance evaluation is significant.

### Keywords

Cronbach's alpha, scale, reliability, significance, validity, categorize.

### Resumen

La administración del talento es esencial dentro de una organización, del talento de sus colaboradores depende su éxito o fracaso. La fiabilidad, validez y seguridad sobre el uso y administración de la evaluación del desempeño son indispensables para tomar decisiones sobre el talento, la estadística es el medio ideal para brindárselos. En este estudio se adapta la metodología estadística aplicada en evaluación psicométrica y educativa para su análisis. En este artículo se presenta el estudio que responde a la interrogante ¿Cómo reducir el efecto de imparcialidad que tienen las distintas variables que afectan la evaluación de desempeño en la asignación de calificaciones a los evaluados y su clasificación en niveles del sistema de nueve cajas?, se divide en 3 partes, que se responden utilizando metodología estadística.

### Palabras clave

Alfa de Cronbach, Spearman Brown, evaluación del desempeño, Baremo, fiabilidad, significancia, validez, categorizar.

## Introduction

Statistical techniques and tools have developed application in educational and psychometric evaluation, their principles and purposes are similar to those of performance evaluation, on this basis this study is developed. The reliability and validity of the assessment instrument is measured using Cronbach's Alpha and Spearman Brown, appropriate measurements according to Aiken (2003). According to Brown (2006) the distinction of normative groups is indispensable when categorizing the results of an evaluation, it confers fairness and external validity, the analysis of the variables that influence the performance rating is presented by applying the Mood test and by being very close the mean and median ANOVA. These tests confirm that the organizational level influences the ratings given to employees in the performance evaluation, and on this basis the normative groups are identified using the difference between means to finally build the scale with deciles that fit the horizontal axis of the nine-box system.

## Development of the study

The study has a descriptive and correlational scope, with a non-experimental design. Due to the limitations in the access to information, the database of an exercise carried out in December 1999 (17,919 evaluated and 1,123 evaluators) was analyzed. It was done in phases, the first one on the referential framework concludes that principles of educational and psychometric statistical analysis can be adapted. In the analysis phase, the following calculation formulas were used:

To measure the validity and reliability of the instrument, on the population:

Cronbach's Alpha

$$\alpha = \frac{k}{k-1} \left[ 1 - \frac{\sum s_t^2}{s_x^2} \right] \text{Aiken (2003)}$$

$s_t^2$  is the variance of the test results, sum of the population variance of the 6 aspects evaluated equal to 1.38,  $s_x^2$  is the variance of the test scores. The variance is the total sum of the 6 aspects evaluated for each individual which is equal to 6.76.

Spearman Brown ( $r_{11}$ )

$$r_{11} = \frac{2r_{oe}}{1+r_{oe}} \text{Aiken (2003)}$$

$r_{oe}$  = correlation coefficient

To analyze trends in the evaluation of the evaluators and sociodemographic variables on the ratings assigned, a sample was drawn by simple random probability sampling, calculating its size using the formula for descriptive studies and finite population.

$$n = \frac{N * Z_{\alpha}^2 pq}{e^2(N-1) + Z_{\alpha}^2 pq} \text{Aguilar (2005)}$$

$N$  = total evaluators;  $n$  = sample size;  $Z$  statistical parameter for 5% confidence level, and equal to the maximum accepted error 0.05 and  $p = q = 0.5$ .

The hypothesis testing analyses were analyzed using Mood's Median, ANOVA and Bonferroni post hoc test. Based on these tests, the results, conclusions and recommendations are presented.

## Results obtained

The results are presented in three parts: calculation of the reliability and validity of the evaluation instrument, trends in the assignment of ratings by the evaluators, and design of the rules for classifying the evaluation ratings.

Calculation of Cronbach's Alpha and Spearman Brown. The evaluated competencies that apply to all workers are taken into account (knowledge of the organization, solving work problems, accountability, teamwork, service and example).

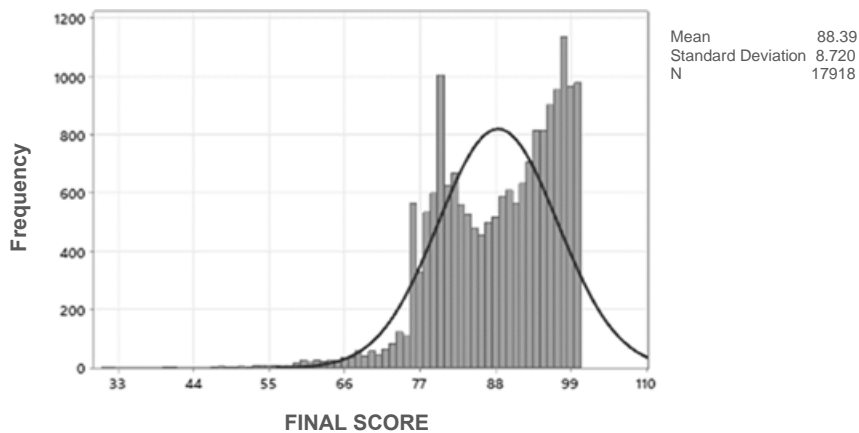
$$\alpha = \frac{6}{6 - 1} \left[ 1 - \frac{1.38}{6.76} \right] = 0.955$$

$r_{oe}$  = CORRELATION COEFFICIENT = (vector of  $\Sigma$  of grades first half; vector of  $\Sigma$  of grades second half) = 0.812.

$$r_{11} = \frac{2 * 0.812}{1 + 0.812} = 0.937$$

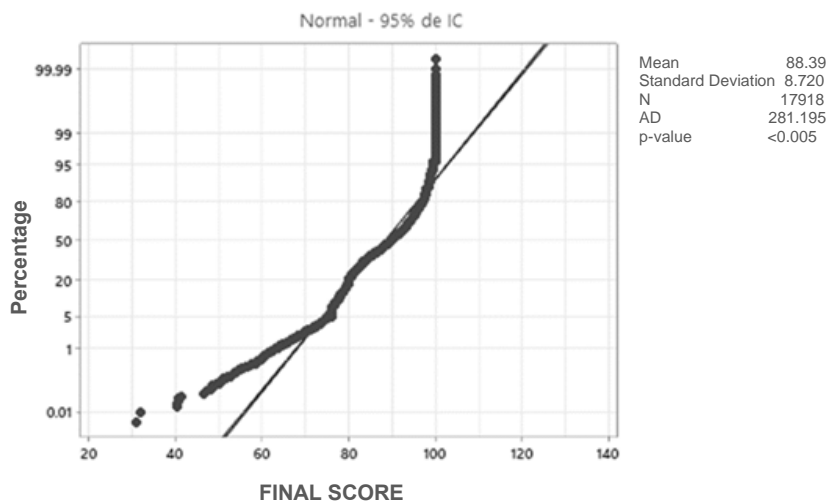
**b. Trend analysis of rating assignment by evaluators.**

Figure 1. Histogram with normal curve of the rating of the evaluated persons.



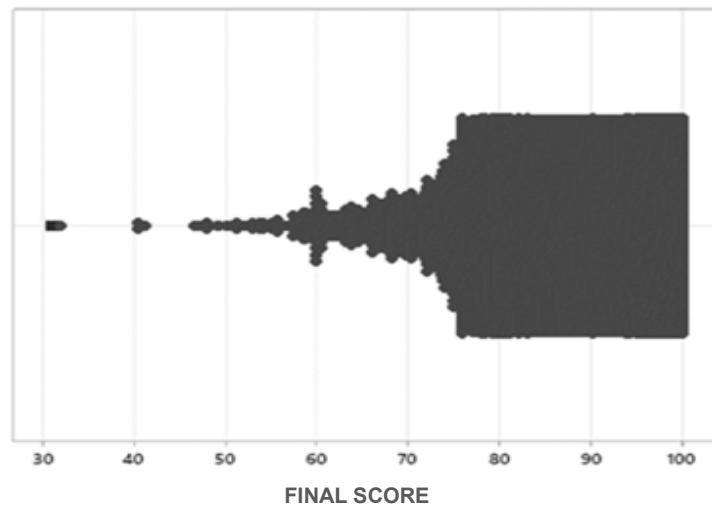
Source: own elaboration

Figure 2. QQ-plot of the rating of those evaluated.



Source: own elaboration

Figure 3. Outliers of the evaluation score.



Source: own elaboration

The normality of the population was rejected with the Grubbs test for outliers with an  $\alpha$  of 5%. The graphs show that there is an evaluation trend, as can be seen in graph 1, the trend is to the right (favorably) as observed in the QQ-plot, however, there are few rigorous evaluators when evaluating, as can be seen in the outlier graph. A hypothesis test is applied to a sample of 287 evaluators who evaluated 4,735 workers, by means of the Mood test the hypothesis null hypothesis:

H0: Population medians are all equal.  
 H1: The population medians are not all equal.

GL	Chi-square	p-value
271	2272.43	0.0000

The normality of the population was rejected with the Grubbs test for outliers with an  $\alpha$  of 5%. The graphs show that there is an evaluation trend, as can be seen in graph 1, the trend is to the right (favorably) as observed in the QQ-plot, however, there are few rigorous evaluators when evaluating, as can be seen in the outlier graph. A hypothesis test is applied to a sample of 287 evaluators who evaluated 4,735 workers, by means of the Mood test the hypothesis null hypothesis:

The p-value is .0000, so the null hypothesis is rejected, and it is concluded that there are

evaluators with a tendency to be stricter or kinder than others when assigning ratings.

The analysis is presented to detect whether there is any sociodemographic variable that influences the ratings assigned. Based on a fishbone analysis, it is identified that the organizational level could be a variable that affects the ratings of those evaluated. The organizational levels analyzed are 1 operative, 2 specialized operative, 3 specialized, 4 technician, 5 professional technician, 6 professional, 7 management and 8 professional assistance. By means of the Mood test and an ANOVA this hypothesis is tested: Mood test:

H0: The population medians are all equal.  
 H1: The population medians are not all equal.

GL	Chi-square	p-value
7	309.61	0.0000

**ANOVA**

H0: The means of the ratings by organizational level are all equal.  
 H1: The means of the ratings by organizational level are not all equal.

**Table 1. ANOVA**

	Sum of squares	gl	Mean squared	F	Sig.
Between groups	28086.95	7	4012.42		
Within groups	311544.52	4722	65.977		
<b>Total</b>	<b>339631.48</b>	<b>4729</b>			

Note: Own elaboration

Based on the results, a scale was designed with independent tables classified by organizational level. The categorization of levels is determined by applying an analysis of differences between means of organizational levels using Bonferroni. The difference between the means of level 1 and 2 is minimal and its significance is greater

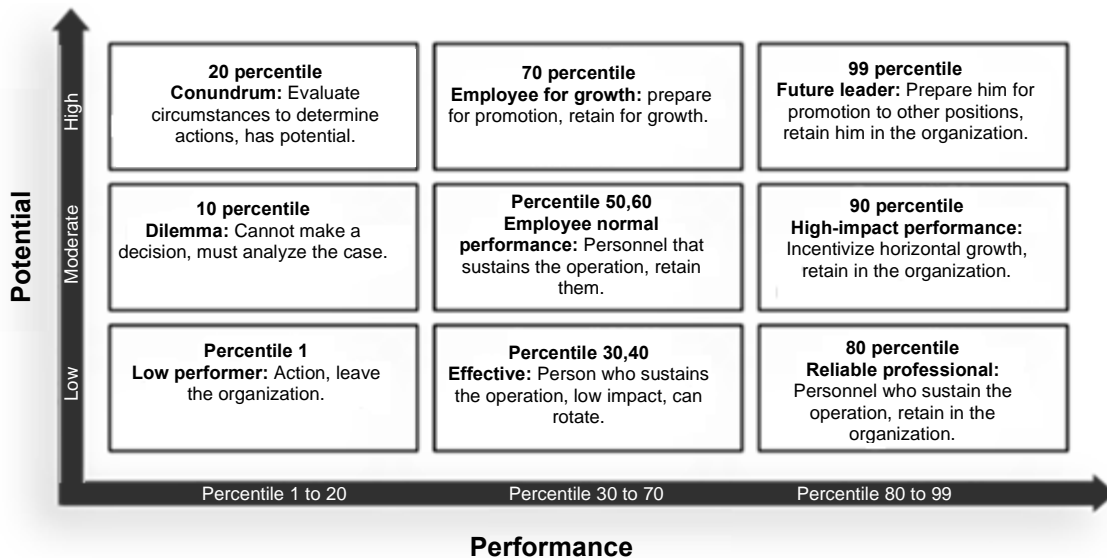
than .05, so organizational level 1 and 2 are grouped in the same category. In the Scale, the percentiles are presented and in column 2 their classification in the 9-box system (X-axis of Figure 4), in this way the percentiles allow distributing the classification of talent in an objective and fair way.

**Table 2. Scale**

Percentile	Interpretation 9-box system	Organizational Level			
		1 y 2	3 y 4	5 y 6	7 y 8
1	Below	61	65	67	77
10	Low, low	62-74	66-78	68-80	78-86
20	Low	75-77	79-80	81-82	87-93
30	Low, high	78-79	81-83	83-85	94-95
40	Average, low	80-81	84-85	86-90	96
50	Average	82	86-88	91-93	97
60	Average, high	83-85	91	94-95	98
70	High, low	86-88	92-94	96	-
80	High	89-93	95-96	97-98	99
90	High, high	94-96	97-98	99	-
99	Higher	97-100	99-100	100	100

Note: Own elaboration

Figure 4. 9-box system with performance percentiles



## Discussion of results

The result of the Cronbach's Alpha coefficient (0.95) and Spearman Brown (0.93) with which the reliability and validity of the instrument are evaluated, define it as valid and reliable according to Frías Navarro (2019) who states that values greater than 0.7 are acceptable.

Abarzúa (2017) states that the design of a scale allows conferring impartiality to a test and that a difference in results between different groups may be a reflection of the inequities experienced by the groups themselves, this coincides with the result of the study that distinguishes groups by organizational level, not everyone in the organization has the same characteristics due to the nature and requirements of the position.

Systematizing this analysis statistically, for the aforementioned reasons, is correct and proposes improvements for the execution of a performance evaluation exercise. These improvements provide reliability by appropriately assigning the categorization of

employee performance to the horizontal axis. the horizontal axis of the 9-box system. of the 9-box system.

## Conclusions

The reliability of the evaluation instrument analyzed is high, indicating that it is adequately congruent with the aspects it measures and that different groups of employees, upon being evaluated with the same instrument, will obtain similar results.

There are tendencies of extreme evaluation, however, the evaluators tend to favor the evaluated employees for the most part.

The scores obtained by the appraisees are directly proportional to the organizational level to which the appraisee is assigned.

It can be affirmed that the level of reliability and credibility of the performance evaluation increases when applying the methodology developed in this study, since it provides certainty about the three aspects analyzed in it. the three aspects analyzed in it.

## Recommendations

When designing an instrument to evaluate performance, it is necessary to verify its reliability and statistical validity.

It is necessary to train evaluators on how to evaluate, due to the existence of extreme evaluation tendencies.

It is important to detect the existence of socio-demographic variables that affect the evaluation ratings of employees in order to regulate the interpretation of the evaluation result so that it is accurate and fair.

If the objectivity and reliability of the process needs to be sustained and accurate decisions about the careers of its employees need to be made, it is advisable to apply the methodology presented in this study.

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## About the author

**María del Carmen Muñoz Pineda** is a professional with 30 years of experience in management and human resources and administrative areas in Guatemala, Central America and Panama. Industrial Engineer, with a Master's Degree in Applied Statistics from the Universidad San Carlos de Guatemala and an MBA with a specialization in Human Resources from the Universidad Francisco de Vitoria in Spain.

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## Declaration of Interests

I declare that I have no conflicts of interest that could have influenced the results obtained or the proposed interpretations.

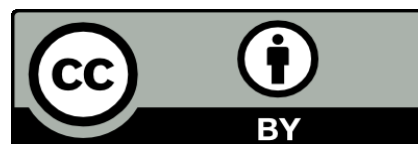
## Informed Consent Statement

The study was conducted in compliance with the Code of Ethics and Good Publishing Practices.

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## Steps in the implementation of care policies for the population with disabilities in the USAC. Challenges and possibilities


### *Pasos en la implementación de las políticas de atención a la población con discapacidad en la USAC. Retos y posibilidades*

Karla Amparo Carrera Vela   
Universidad de San Carlos de Guatemala  
kcarrera@psicousac.edu.gt

Macjorie Beatriz Avila García   
Universidad de San Carlos de Guatemala  
mavila@psicousac.edu.gt

Francisco José Ureta Morales   
Universidad de San Carlos de Guatemala  
fureta@psicousac.edu.gt

Gabriela Alvarez García   
Universidad de San Carlos de Guatemala  
galvarez@psicousac.edu.gt

Verónica Jeannette Estada Gonzalez   
Universidad de San Carlos de Guatemala  
vestrada@psicousac.edu.gt

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#### Abstract

This article reflects the analysis and synthesis of the main theoretical and methodological aspects of four research papers on the Policies for the care of the disabled population that were approved in 2014 at the USAC. These works were carried out by four graduates of the first cohort of the Master's Degree in Social Analysis of Disability (2016-2017). Two of the investigations started from a qualitative methodological approach, one investigation had a mixed approach and one, a quantitative approach. The four works were carried out in two or more academic units of the USAC, among them: School of Psychological Sciences, School of Political Science, Faculty of Architecture, Faculty of Engineering and Faculty of Economic Sciences. The investigations included the participation of students with disabilities, teachers, coordinators and experts in the field. Among the main results are that at the date of publication of the investigations: there was a lack of knowledge in the academic units on how to consistently implement the Policies for the care of the population with disabilities; openness on the part of teachers, students and authorities was evidenced, however, it is essential to have close accompaniment so that the actions carried out become a mechanism that guarantees the entry, transit and graduation of students from higher education. The operationalization of the Policies requires a budgetary, methodological and monitoring infrastructure, having clarity on the actors responsible for each part of the process.

#### Keywords

barriers, educational system, exclusion, reasonable accommodation

#### Resumen

En el presente artículo se plasma el análisis y síntesis de los principales aspectos teóricos y metodológicos de cuatro trabajos de investigación en torno a las Políticas de atención a la población con discapacidad que fueron aprobadas en 2014 en la USAC. Dichos trabajos fueron realizados por cuatro egresadas de la primera cohorte de la Maestría en Análisis Social de la Discapacidad (2016-2017). Dos de las investigaciones partieron de un enfoque metodológico cualitativo, una investigación tuvo enfoque mixto y una, enfoque cuantitativo. Los cuatro trabajos se realizaron en dos o más unidades académicas de la USAC, entre ellas: Escuela de Ciencias Psicológicas, Escuela de Ciencia Política, Facultad de Arquitectura, Facultad de Ingeniería y Facultad de Ciencias Económicas. En las investigaciones se contó con la participación de estudiantes con discapacidad, docentes, coordinadores y expertos en la materia. Entre los principales resultados se encuentran que a la fecha de publicación de las investigaciones: existía desconocimiento en las unidades académicas sobre la forma de implementar de forma consistente las Políticas de atención a la población con discapacidad; se evidenció apertura por parte de docentes, estudiantes y autoridades, sin embargo, es fundamental tener acompañamiento cercano para que las acciones realizadas se constituyan en un mecanismo que garantice el ingreso, el tránsito y el egreso de los estudiantes de la educación superior. La operativización de las Políticas, requieren una infraestructura presupuestaria, metodológica y de seguimiento, teniendo claridad en los actores responsables de cada parte del proceso.

#### Palabras clave

barreras, sistema educativo, exclusión, ajustes razonables

## Introduction

The School of Psychological Sciences (ECPs) of the University of San Carlos of Guatemala (USAC) is a pioneer in generating inclusive education processes for students with disabilities in higher education. From different areas, it has carried out strategic actions coordinated to guarantee the right to education, among these actions we can mention: the spaces for discussion on disability and teacher training processes that have been carried out with the teaching staff, the hiring of the professional sign language interpreter from 2018, the realization of the program of accompaniment to the student with disabilities that operates from the Department of Supervised Professional Practice (EPS), the various actions carried out from the Department of Technical Careers and the opening of the Master's Degree in Social Analysis of Disability (hereinafter MASDIS) in 2016, to mention some of the specific actions that guarantee the admission, progress and graduation of students with disabilities in higher education.

The Master's Degree in Social Analysis of Disability, which is developed in the Department of Graduate Studies of the ECPs, is unique in Guatemala and is based on the commitments of the State assumed by ratifying various instruments on human rights, including the Convention on the Rights of Persons with Disabilities (UN, 2006).

The MASDIS is inscribed under the approaches of human rights, intersectionality and action without harm, congruent with the social model of disability. It seeks that the professional who graduates has the necessary skills to properly handle various methodological tools for the analysis of the factors that converge for disability to occur and to make proposals for intervention from the proposed approaches in various areas, to promote the guarantee of the rights of persons with disabilities. It is a master's degree in arts that is made up of four training areas that support the 12 courses that are developed during the two years, as described in the curriculum shown in Table 1.

Table 1. MASDIS curriculum (2016-2017).

Year	Semester	Area of training	Course	
First year	First	Sociopolitical and economic reality	Context of the disability MD-01 Inclusion, exclusion MD-02	
		Investigation	Integrative Seminar I MD-03	
	Second	Principles of intervention	Human rights, public policies and enforcement mechanisms MD-04	
		Investigation	Intervention formulation from the approach of action without harm MD-05	
	Second year	Third	Principles of intervention	Integrative Seminar II - benchmarking of public policy MD-06
			Substantive focus	Memory and disability MD-07
Investigation			Education for diversity MD-08	
Fourth		Substantive focus	Integrative seminar III -social analysis of disability MD-09	
	Investigation	Community-based rehabilitation MD-10		
			Social and labor inclusion MD-11	
			Integrative seminar IV -Substantive proposal for disability care MD-12	

The master's degree is congruent with USAC's Policies for the Care of the Disabled Population (hereinafter The Policies) approved in 2014, which in turn, respond to the commitments assumed by the State upon ratifying

the Convention on the Rights of Persons with Disabilities. These policies are sixteen in total and are divided and organized into USAC's functional and operational frameworks as shown in Table 2.

Table 2. Policies of attention to the population with disabilities at USAC

Functional and operational frameworks	Policies
<b>Teaching</b>	Focused on enhancing the learning capabilities of students with disabilities.
	Adjustments in the methodology for the development of the teaching-learning process.
	Adaptation in the admission process and support in transit.
	Use of ICT to generate accessibility in learning.
<b>Investigation</b>	Transversalization of disability in the investigation processes to be carried out.
	Promote multidisciplinary investigation in the field of disability. Collaborative investigation between teachers and students.
<b>Extension</b>	Training USAC students in the area of disability from the extension area.
	Attention to the disabled population from the extension area.
	Interinstitutional relationship to strengthen processes in the area of disability.
<b>Administration</b>	Processes of labor inclusion
	Accessible procedures and adaptations for student admission. Sensitization and awareness raising for teachers and administrative staff with a focus on rights.
<b>Territory and infrastructure</b>	Universal design in new projects and actions to carry out the necessary adaptations to generate accessibility to physical spaces.
<b>Planning and monitoring</b>	Coordinated actions from planning to guarantee the right to education for students with disabilities.
	Actions to enhance planning in order to eradicate discrimination against people with disabilities.

As part of the academic professional practice of the master's degree students of the first MASDIS cohort (2016-2017), out of 17 investigative works, four focused on the analysis of Policies, which are named in Table 3.

Table 3. Titles of the investigative works

1	Methodological development of the teaching axis -incises two and four- of the Policies of attention to the population with disabilities at USAC (Alvarez, 2017).
2	Educational inclusion in higher education: teaching attitude and student experiences (Carrera, 2017).
3	Proposed observatory of the Policies of attention to the population with disabilities in the USAC (Avila, 2017).
4	Processes of labor inclusion of teachers with motor disabilities in the USAC. USAC (Estrada, 2017).

The units of analysis in the four investigative works were: students with disabilities, teaching in higher education, the methodology to generate inclusion, the policies of attention to the population with disabilities at USAC, the teaching attitude towards students with disabilities, student experiences, and the labor inclusion of teachers with motor disabilities. The following is the definition of each unit of analysis.

Disability imposes on the impairment that a person has (Tobar, 2013). The Convention (UN, 2006) is emphatic that disability is a term that advances over time and it is increasingly possible to have a better vision of what it implies. Palacios (2008) indicates that disability arises from the interaction of people with impairments and the barriers that limit the person's development. For their part, several authors agree that there is a range of barriers, including: attitudinal, access to information, communication and physical space barriers (Adame, et al., 2008). (Adame, et al., 2016; Pérez-Castro, 2021).

There are explanatory models of disability, for example, the marginalization model and the welfare model, which cancel out the alterity of the person with an impairment and, therefore, deny the participation in the various activities of daily due to the belief that the person is not

capable of being self-sufficient (Aguado, 1995). The medical-rehabilitative model that conceives disability as a disease and seeks normalization (Brognia, 2006), and the social model that postulates that disability arises when a person with impairments is unnecessarily isolated and excluded from participation in the society of which they belong. Therefore, its analysis requires an intersectional look and attached to human rights since it constitutes a situation of oppression (Tobar, 2013).

From a human rights perspective and under the social model of disability, it is understood that political, economic, social, cultural and environmental factors converge for disability to occur (Hüg, et al., 2019), which affirms that disability is not an individual matter, but that there is social joint responsibility, therefore, it is essential to see it as a social production (Barton, 1998). From this perspective, it can be seen that in higher education there are various agents that have a determining role in generating inclusive education processes, for example, teachers. For Freire (2009), in the teaching and learning process, it is the teacher who promotes interaction with knowledge and in turn stimulates the development of autonomy so that the learner is the one who builds themselves at every moment of the process. In this regard, teachers need knowledge of methodologies that allow them to make adjustments

to students with disabilities in order to guarantee their full development in the process (UN, 2006).

Reasonable adjustments must be made in the teaching and learning process, specifically in planning, execution and evaluation, this allows the student with a disability condition to enhance the skills of the discipline being studied (Alvarez, 2017). As mentioned above, there are several barriers faced by students with disabilities: attitudinal, access to physical spaces, access to information and communication. All these barriers are highly harmful to the development of the person, however, of the four types which generate greater segregation, exclusion and discrimination are the attitudinal barriers.

Negative attitudes towards people with disabilities constitute barriers that do not allow the development of policies aimed at inclusion (Arellano et al., 2019). Several studies reveal that attitudes towards persons with disabilities may be associated with sociodemographic factors, defining them as the characteristics assigned to sex, gender, age, religion, area of residence, marital status, level of studies, profession or usual work, socioeconomic level, contact with persons with disabilities, reason for contact, frequency of contact, disability condition and level of knowledge about disability (Bermúdez and Navarrete, 2020; Bolaños-Motta, et al., 2020; Córdoba-Warner, 2020).

In this regard, it is of vital importance to generate investigation processes to account for the interaction of the aforementioned variables in the implementation of policies in USAC. It should be assumed that education is a key right (Rodino, 2015) since it enables the opening of doors such as social and political participation and access to decent employment. One of the characteristics of

human rights is interdependence, which is evident in these two rights: the right to education enables access to decent employment; on the contrary, the denial of this right undermines the short, medium and long term future of the person.

## Methodology

The methodological model used for the realization of the investigative work is described below.

Alvarez's (2017) research was based on a qualitative methodological approach. The population consisted of 22 participants, 9 teachers from the School of Psychological Sciences and 13 from the School of Political Science of USAC. A total of 13 women and 9 men participated, as well as 12 students from 7 academic units, of which 8 were women and 4 were men. The instruments used were: 1) a structured interview based on the elaboration of a tree of categories and subcategories that emerged from the objectives of the investigation. 2) A guide for focus groups conducted with students with disabilities. The guide was also constructed using the category tree technique (Cisterna, 2005). The procedure followed by the research started with the piloting of the instruments, meetings to make known the objectives of the research with the two academic units involved, the application of both instruments, the analysis of the information, the discussion and preparation of the report.

Carrera's investigation (2017) was based on a mixed methodological approach. The population consisted of 60 participants, 30 teachers from the ECPs and 30 from the Faculty of Architecture of the USAC, as well as the participation of 10 students with physical, hearing and visual disabilities from the ECPs. The instruments used were: 1) The questionnaire (Likert-type scale) for

university teachers on educational inclusion, made up of a section of sociodemographic information, 13 statements that indicate attitudes towards disability and 5 questions multiple choice answers that allow to have reference of knowledge about adjustments to generate inclusion. 2) A focus group guide containing 15 generative questions that was applied to students with disabilities. The procedure followed in the investigation started with the implementation of the instruments, meetings to make known the objectives of the investigation with the two academic units involved, and the application of the instruments. For the analysis of the information, it was used the design of a single measurement (quantitative) and the grounded theory and discourse analysis (qualitative).

The investigation by Estrada & Ureta (2017) applied a quantitative methodological approach. The population consisted of 39 participants, 27 teachers and 12 coordinators, from the ECPs, the Faculty of Engineering and the Faculty of Economics of the USAC. The instrument used was a survey divided into five areas: knowledge of the axes and policies, identification of teachers with disabilities, admission profile for hiring teachers, universal design and attitudinal barriers.

The procedure followed in the investigation began with the construction of the scale by means of the category tree technique, implementation of the instruments, meetings to inform the academic units involved of the objectives of the investigation, application of the instruments and preparation of the final report.

Avila's (2017) investigation was conducted with a qualitative methodological approach and focused on analyzing the first disability observatory performed in 2013. The instruments used were: 1) A focus group guide made up of 10 questions addressed to 5 researchers of the first disability observatory. The instruments were applied, the analysis of the information, the review of some of the inputs that served as a basis for the construction of the Policies and the elaboration of the conclusions and recommendations were carried out.

**Results**

Each investigation provided elements for the analysis of the structure of the Policies at USAC, as detailed in Table 4.

*Table 4. Structure of policies for the care of people with disabilities*

Description	Analysis of the elements found
Define the problem	<p>To define the problem, it started from the information found in the III Student Census, done by Usac in 2009, where in section 5.8 Information on integral health, it requests information related to impairment and disability.</p> <p>The overall result is: 931 students with disabilities: physical, visual and hearing are enrolled in the university.</p> <p>Problem: There are students in the university classrooms that require some type of adjustment to access information or in the methodologies, due to a disability condition, however, there is no institutionalized route to make them. The probability is very high that within the academic units they were unaware of its existence.</p>
Describe the problem	<p>To describe the problem, disaggregated information from the III Student Census (2009) is presented below.</p>

	<p>Students with limited mobility require accessibility to physical spaces: entry to the campus, buildings, both horizontally and vertically, accessible restrooms, ramps or elevators, space inside classrooms.</p> <p>Students with hearing impairment require sign language interpreter, adjustments in the presentation of information, in the evaluation processes, and support such as tutoring for full access to the information provided.</p> <p>Students with visual impairment require adjustments to access information in printed media, adjustments for their mobility within the campus and buildings. As well, access to information developed by professors, as well as to access evaluations.</p>
<b>Identifying Stakeholders</b>	<p>It was determined that the key stakeholders would be represented by: Dean of the Faculty of Humanities, Dean of the Faculty of Engineering, Dean of the Faculty of Medical Sciences, Director of the School of Psychological Sciences, General Coordinator of Planning, Director of the General Directorate of Administration, Head of the Directorate of Student Welfare and the USAC Delegate to the National Council for Attention to the Disabled Population (CONADI). Overall: teachers, administrative and service managers.</p> <p>In the principles governing the policies, emphasis is placed on the fact that students with disabilities must be the protagonist of their academic training process</p> <p>Identification of causes:</p> <p>Invisibilization of the person with disabilities.</p> <p>Discrimination and exclusion in the guarantee of their rights.</p> <p>Inequality and discrimination in the transit within the educational system, when it does not have the</p> <p>Predominance of a welfare vision and as a person in a dependency relationship, who cannot develop in a university training process.</p> <p>Identification of consequences:</p> <p>Low school performance, not due to the disability, but to the inexistence of adjustments.</p> <p>School failure/repetition</p> <p>School desertion</p> <p>Perpetuates exclusion and poverty</p>
<b>Identify causes/ Distinguish consequences</b>	<p>Each of the axes has proposed policies. These are linked to the strategic plan. They are related to a program:</p> <p>Human development program</p>
<b>Design objectives and define desired results</b>	<p>Each of the policies is linked to:</p> <p>The strategic plan</p> <p>A program</p> <p>It has project ideas that allow to move towards the fulfillment of the policy.</p> <p>Each project idea has an assigned unit or entity within USAC that is responsible for executing it.</p> <p>And the various project ideas are planned for the short term (2 years), medium term (4 years) and long term (no more than 10 years).</p>
<b>Define operations</b>	<p>In these, it is stated what needs to be done, however, there is no reference to an operational plan.</p>
<b>Build the operational plan</b>	

Source: with information from (Flacso, 2013; Usac, 2016; Alvarez, 2017; Avila, 2017).

In Avila's study (2017), the results indicate that:

- Participants in the first disability observatory in Guatemala in 2013 were identified, which was based on four key themes of the convention: education, employment, health, and accessibility.
- One of the themes that coincides is that access to information is vital for dissemination efforts. This provides ideal information to serve as a reference document on the topic of disability and sheds light on the Guatemalan system's reality in this area.
- Factors affecting the observatory's implementation include time, funding, and the importance of having qualified personnel for such projects.
- Both participant groups have similar indicators in different types of observatories, showing a clear trend toward information instruments with a social orientation and a human rights focus.
- The development of these observatories has facilitated the gathering of inputs for political advocacy, providing information and creating documents that serve as reference points nationally and internationally due to the interest identified in each of the analyzed observatories.

Alvarez's research (2017) proposes the following results:

- Students with blindness and deafness encounter significant barriers in accessing information and communication.
- There is no accessible bibliography available for students with visual and auditory disabilities.

- When teachers are unaware of how many students with disabilities they will be working with and the specific disability conditions, they may not consider their unique needs when planning activities.
- A high percentage of surveyed teachers have no experience working with students with disabilities and therefore do not factor this into their planning.
- There is a lack of knowledge and understanding of the specific learning styles and needs of individuals with visual, auditory, and physical disabilities.
- The participation of sign language interpreters is crucial.
- Lack of awareness of updated definitions, responsibilities of each stakeholder, and appropriate adjustments to teaching and learning methods can lead to exclusion.
- Strategies that teachers should consider for developing an objective evaluation system that takes into account the unique needs of students with disabilities, from a human rights perspective, are not well-known.
- The deficiencies of individuals have been perceived as more relevant than the skills they have developed.
- Teachers believe that the absence of clear enrollment and graduation profiles for students with disabilities poses a risk of diverting the goal of producing qualified professionals to address national issues.

The findings from Carrera's study (2017) include:

- Regarding curricular accessibility, it is identified as a category with fewer frequent results, with little practice on the part of teachers in terms of adapting objectives,



content, and/or evaluation.

- Students reported having no evidence of these practices and believed that teachers used the same procedures and methods for all students without distinction.
- The study was conducted with an emancipatory vision (Álvarez-Gayou, 2003), aiming not only to improve the process but also to promote social change among participants and raise awareness of their social circumstances.
- Due to the intentional sampling, the results cannot be generalized to other academic units. The main limitations in the execution of the graduation work include a lack of records of students with disabilities in the ECPs and the Faculty of Architecture at USAC, and physical barriers (lack of ramps and others) in buildings prevented the participation of some students with disabilities in the focus group.

The findings of Estrada & Ureta's graduation work (2017) determined the following:

- There are personnel with motor disabilities working at USAC.
- In some cases, there still exist stigmas, discrimination, inequality, and inequity from peers toward teaching staff with motor disabilities.
- To facilitate the process of labor inclusion, job profiles, required competencies for professionals, and suitable conditions in terms of infrastructure, equipment, and furniture for incoming teachers in different academic units of the University must be determined.

## Discussion

In Guatemala, despite having a significant series of legal instruments that emphasize

that the State is obligated to create mechanisms to guarantee human rights to all Guatemalans without distinction, inequality in the distribution of wealth in the country persists, leading to impoverishment and the denial of rights inherent to individuals (Rodríguez, 2015). Education has been a target of this inequality and injustice (Rodino, 2015).

The admission of students with disabilities to USAC has been a process that has undergone variations over time. It has ranged from explicit denial of admission to exemption from basic knowledge tests and specific exams. Additionally, there has been a prevailing attitude of hegemony, rejection of diversity, and a charitable or segregating view towards individuals with disabilities, which has been a constant in society and has been visible within USAC's internal workings. Currently, students with disabilities who have managed to overcome barriers imposed by an unequal educational system, which denies them access from an early age, attend USAC.

The right to education should not be understood merely as gaining admission to an educational institution, in this specific case, USAC, and being included in its records. Instead, this right implicitly guarantees that every stage, including admission, progress, retention, and graduation, will be accompanied by measures for accessibility and relevant reasonable adjustments. In this regard, in 2014, USAC took a significant step by approving policies for serving the disabled population. These policies aim to ensure and promote the full exercise of all human rights, create opportunities for development, integration, and community participation within USAC, encompassing six fundamental areas: teaching, research, extension, administration, territory and infrastructure, planning, and monitoring.

These policies are based on the historical disadvantage faced by individuals with disabilities in accessing three rights that are pillars of development: health, education, and employment (Adame et al., 2016; Pérez-Castro, 2021). The lack of assurance of these rights leads to exclusion and discrimination, perpetuating the vicious cycle between poverty and disability (Tobar, 2013; Grech, 2016). Together, these three rights are known as interconnected rights (IDHDES, 2014) because a violation of one unquestionably affects access to the others. Various studies (Brognia, 2006; FLACSO, 2014; Grech, 2016) highlight the existing barriers that individuals with disabilities face in accessing the right to education, at both the primary, basic, diversified, and higher education levels.

In 2013, the Latin American Faculty of Social Sciences (hereinafter, FLACSO) reported that the Student Welfare Division had received 103 requests for exemption from basic exams due to disability between 2011 and 2013. In 2018, the United Nations Educational, Scientific and Cultural Organization (UNESCO) referred to the Student Disability Support Office at USAC, stating that during that period, 94 students sought assistance and exemption from first-entry exams due to disabilities. These data provide a parameter for understanding how the number of students with disabilities has been growing. The inclusion of students with disabilities in higher education represents an important step in social and educational inclusion processes; however, reasonable adjustments are necessary to ensure their admission, progress, and graduation.

The human rights approach includes principles that underlie actions aimed at breaking down barriers for the development of vulnerable individuals. These principles include: a) the principle of free participation; b) the principle of responsibility; c) the principle of non-discrimination; d) the principle of empowerment,

and e) the principle of minimum policy standards. These five principles guide the actions developed so that the ultimate goal is not under an assistive view that limits the participation of people with disabilities but rather makes them active participants, in charge of their own life processes.

The human rights approach proposes various actions to combat discrimination, which is defined as exclusion or restriction through actions or omissions, with or without intention, that seek to hinder, prevent, or nullify the exercise of the human rights and fundamental freedoms of historically discriminated individuals and groups. Therefore, it is essential to identify the barriers faced by students with disabilities, including barriers to accessing communication, information, or physical spaces. Reasonable adjustments should be made regarding the methodology used, assessments, and other supports in the academic training process. Brognia (2006) refers to architectural, methodological, communication, information, and attitudinal barriers.

The implementation of policies at USAC requires the allocation of funding, resources, and budgets. The budgetary process should run in parallel with the planning, considering short, medium, and long-term timeframes, contingencies, socio-political contexts, and anticipated income and expenses. Policies should have a structure that allows for a theoretical foundation explaining key concepts at the core of the policy's essence, guiding the discussion, and fitting within a knowledge paradigm. A legal framework should support the commitments of the State and, in this particular case, the commitments of USAC. An operational framework should identify key actors in this process, along with a methodological framework proposing the path to achieve the policy's goals.

According to Segeplan (2015, p.24), there are two fundamental steps for an effective policy: 1) Linking policy priorities with strategic and operational planning, which is evident in the policies, and 2) budgeting operational and strategic plans. If these two aspects are not taken into account, it can hinder execution since each academic unit is responsible for covering the costs of the actions they implement. Considering the inequality in budget allocation for faculties, which is greater than for a non-faculty school or regional center, there may be a connection to non-execution.

The contribution of this article lies in a brief examination based on research conducted by graduates of the first cohort of the Master's program in Social Analysis of Disability. It assesses the actions taken by USAC to ensure the right to education for students with disabilities and reflects on important internal aspects of the academic units that participated in various studies. The approval of policies is a significant step; however, it is crucial to follow up on each of the 16 approved policies, linking them to strategic planning as USAC and, therefore, as academic units. Likewise, it should be expressed in budgetary plans to make it a reality rather than merely an exercise of good intentions.

## Conclusions

Based on the contributions of the four graduation papers that make up this article, it can be concluded that the approval of policies for serving the disabled population at USAC has been a crucial step in asserting the rights of individuals with disabilities. This step opens up the possibility for students to enter, progress, stay, and graduate with reasonable adjustments and accessibility measures. Additionally, with this step, USAC fulfills its shared responsibility to contribute to the

solution of national problems. Valuable actions have been taken in various academic units; however, it is necessary to coordinate and monitor them in a timely manner to avoid duplicating efforts.

The structure and design meet the necessary formal aspects. However, it is important to mention that there were no resources available that documented the process, particularly regarding the budget. Therefore, further research is considered necessary to strengthen the present exercise.

The operationalization of policies requires budgetary, methodological, and monitoring infrastructure, with clarity on the responsible actors for each part of the process. This infrastructure is influenced by political, social, economic, and cultural factors that depend on the interests of the authorities and the prevailing welfare regime.

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## About the Authors

**Karla Amparo Carrera Vela** is a Psychologist, holds a Master's degree in Social Analysis of Disability, is a Speech Therapist, Full Professor VII, and General Academic Coordinator.

**Gabriela Alvarez García** is a Psychologist, holds a Master's degree in Social Analysis of Disability, and is a doctoral student in Education at the University of San Carlos of Guatemala. She is a certified Transactional Analyst, Clinical Member of the Latin American Transactional Analysis Association (ALAT). She is a Postgraduate Professor in Psychology and Special Education at the School of Psychological Sciences, USAC, and a researcher at DIGI-USAC.

**Macjorie Beatriz Avila García** is a Licensed Psychologist, holds a Master's degree in Social Analysis of Disability, and is a Technical Occupational and Recreational Therapist. She is a professor in the Technical Career of Occupational and Recreational Therapy at the School of Psychological Sciences. She is also a member of the team that provides support to students with disabilities at the School of Psychological Sciences, USAC.

**Verónica Jeannette Estrada Gonzalez** holds a Master's degree in Social Analysis of Disability, is a Licensed Psychologist, and a University Technical Occupational and Recreational Therapist. She has 25 years of experience as a university professor at the School of Psychological Sciences, USAC.

**Francisco José Ureta Morales** is a Licensed Psychologist from USAC, holds a Master's degree in Measurement, Evaluation, and Educational Research

from UVG, and is a doctoral student in Forensic Psychology at the Universidad Internacional Iberoamericana, Mexico. He is a professor at the undergraduate and postgraduate levels at the School of Psychological Sciences and the Faculty of Humanities. He is also a researcher at DIGI-USAC.

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I declare that I have no conflicts of interest that could have influenced the results obtained or the proposed interpretations.

## Informed Consent Statement

The study was conducted in compliance with the Code of Ethics and Good Publishing Practices.

## Derecho de uso

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## Aggression in men who carry out criminal proceedings for the crime of violence against women in its physical manifestation, in the department of Guatemala

*La agresividad en hombres que llevan un proceso penal por el delito de violencia contra la mujer en su manifestación física, en el departamento de Guatemala*

Brenda Beatriz Flores Luna   
Universidad de San Carlos de Guatemala  
brendafloreslunadepineda@gmail.com

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### Abstract

The purpose of this study is to establish and discover the types and causes of aggression that men who exercise violence toward their partner have. For this, a sample of 20 men accused of this crime was used in the specialized courts of Femicide and Other Forms of Violence of the department of Guatemala. To whom was applied the Buss and Perry Scale, which shows the types of aggressiveness that it presents, and the causes were established through a survey carried out by the researcher. The results obtained determine that each person is individual, in the way of reacting; some do it with hostility, others with anger, others are aggressive verbally, and others physically, these results helped to visualize this behavior in men who carry a criminal process. Also, the causes were established of various types being the sociocultural, which most of those evaluated, influenced their behavior. Another cause was the consumption of alcoholism or drugs, which also had a greater impact on the results; since the reactions of many men were in a state of intoxication when they committed these aggressions on their partner. The incidence of these results reflects the need to have a specific program for these people to help them control these types and causes that cause them to act aggressively.

### Keywords

Aggressiveness causes and types of aggressiveness, violence against women

### Resumen

El presente estudio tuvo por objeto establecer y descubrir los tipos y causas de agresividad, que posee una muestra de hombres que ejercen violencia hacia su pareja. Para esto se utilizó una muestra de 20 hombres sindicados por este delito, en los juzgados especializados de Femicidio y Otras formas de Violencia, del departamento de Guatemala. A quienes se le aplicó la Escala de Buss y Perry, la cual arroja los tipos de agresividad que presenta y las causas se establecieron a través de una encuesta realizada por la investigadora. Los resultados obtenidos determinaron que cada persona es individual, en la forma de reaccionar; algunos lo hacen con hostilidad, otros con ira, otros son agresivos verbalmente, y otros físicamente, estos resultados ayudaron a visualizar esta conducta en los hombres que llevan un proceso penal. Asimismo, las causas se establecieron de varios tipos como: socioculturales que, en la mayoría de los evaluados, incidió en su conducta. Otra de las causas fue el consumo de alcohol o drogas, que también tuvieron un impacto mayor en los resultados; ya que la reacción de la mayoría de los hombres se debió a que se encontraban en estado de ebriedad cuando cometieron esas agresiones a su pareja. La incidencia de estos resultados refleja la necesidad de contar con un programa específico para estas personas que les ayuden a controlar estos tipos y causas que le producen actuar de forma agresiva.

### Palabras clave

Agresividad, causas y tipos de agresividad, violencia contra la mujer

## Introduction

Violence against women is a historical problem in Guatemala, Latin America and Spain, characterized by a patriarchal culture and learned models of machismo. This phenomenon has been increasing and has raised the incidence in our society, in the daily complaints filed by women who have been victims of violence by their partners. The concern that this has generated has led to the development of specific laws that ensure the rights of women, integrity and dignity, guaranteeing them a fulfilling and peaceful life.

This behavior in Guatemala has been inherited from generation to generation, and is associated with the sociocultural context, this problem influences the behavior and interaction of the individual in this case of (men) towards their partners (women). Established roles also contribute to this problem, since due to the particular characteristics of men and women, stereotypes are acquired, which generate unequal power relations, violating the integrity and dignity of women.

The increase in the number of complaints filed by women in recent years against their husbands, partners, ex partners, boyfriends, ex-boyfriends, has increased the number of cases in the courts of violence against women.

Therefore, the objective of the research was to determine the different types of aggression, and to identify the causes of physical aggression that men provoke in their partners, and that lead to an open criminal process in the Courts of Femicide and Violence against Women in the municipality and department of Guatemala, as well as the recidivism of the crime.

Flores (2019) according to information generated by the National Institute of

Statistics (INE) contained in the Statistical Report on Violence against Women, reveals that in 2017 a total of "11,971 complaints of physical violence against women and 2,269 sentences for the crime of violence against women in its physical manifestation" were registered (INE, 2017 as quoted in Flores, 2019). That report is published in response to the international commitment that the State of Guatemala has with international organizations in the field of women's human rights. The report presents evidence and collects valuable information that allows identifying or analyzing the situation and condition of Guatemalan women victims of violence and at the same time support the actions of preventive public policy and eradication of this problem (INE, 2018, p.5). Valuing these contributions, it also becomes necessary to understand the situation of male aggressors, which can have two main objectives: a) to improve living conditions for the women in order for them to have a violence-free life and b) to provide information to generate opportunities for the care of male aggressors.

## Aggressiveness, causes and types

The concept of aggressiveness as referred by Flores (2019) "is a normal physiological behavior", according to authors such as Archer (2009), "it can help the survival of the individual and its species" (p. 9). We understand that this expression is usually natural in individuals, who will use it intuitively when they feel threatened, to the point of destroying the opponent. destruction of the opponent. Following the studies by López Latorre (2007), that aggressive behavior is classified according to three variables which are studied, contemplating the following aspects:

-Modality: all types of physical aggression, such as: hitting, kicking, pinching, physical injuries caused by attack with weapons,



verbal aggression, such as: threats, and rejection.

-Modality: all types of physical aggression, such as: hitting, kicking, pinching, physical injuries caused by attack with weapons, verbal aggression, such as: threats, and rejection.

-Interpersonal relationship: when the aggression is direct, through threats, attacks or rejection, and when the aggression is indirect through gossip or through the destruction of private property.

As referred by Flores (2019) "the first social context that influences aggressive behavior in the person as a child is the family" (p.13). This is due to the learned behavior of children by observing the behaviors and the way of interacting of their parents, in terms of aggressive behaviors, are replicated by the children, and used to solve problems and face frustration in an aggressive way (Flores, 2019).

Factors such as cognitive and social, affect aggressive behavior; influencing the result of a social misadaptation, as it makes it difficult to respond in an assertive way, tends to have difficulty building better dealing skills for everyday situations. The personality can also be affected, through the lack of concern for others, the same cruelty or exposed situations that tend to ridicule the subject, are risk factors that lead to dangerous situations. These behaviors as a response to children in the face of aggressive behavior, respond to types of negative emotions which will be used as a reaction.

Parental modeling will make the child acquire an aggressive behavior as an adaptive response that will allow the functionality of the individual in hostile contexts that guarantee the survival of the child and society. (Archer, 2009). As a result, the child learns by observation and consequently, his aggressive

behavior reinforced. Among the antecedents of a violence as referred by Flores (2019), "The subject is influenced by changes in the physical and social environment, or even the consumption of substances, or the carrying of any type of weapon, among others". According to Flores (2019) when analyzing the writings of Alcazar (2011) and Sigel and Victoroff (2009) both authors agree that these factors may result in aggressive behavior; where that aggression is directly towards the woman with the objective of causing harm, pain, contempt and in some cases even the death of the partner (p.9).

Taking Gustafson's (1995) experimental study as a reference, he states that alcohol by itself does not seem to increase aggression or aggressive behavior; however, factors associated with alcohol triggered by frustration, provocation, threats, jealousy or other social factors may enhance the possibility of triggering aggressive or violent behavior.

There are different explanations regarding the alcohol-violence relationship, one of them is the one referred by (López, 1996), where he proposes that alcohol intake is a direct or indirect cause in criminality. According to Flores (2019), alcohol intoxication is classified as a pathology of the drinker, causing by itself, however minimal it may be, violent behavior in the person given his pathological condition (p. 21).

According to Medina (1994) quoted in Flores (2019) place the influence of alcohol, stating that violence is developed by factors exposed to situations, triggering actions or others associated with factors that affect the personality, as well as personal expectations, and even the cultural conditioning of people, either the problem of alcoholism or drug addiction, affect the acts associated with the mistreatment of parents

towards their children, or partners. Becoming a myth that all men who assault their families are under the influence of alcohol or drugs (p. 21).

The consumption of alcohol and drugs is a trigger in the behavior of male abusers, considering appropriate referral of aggressors to different treatment programs, such as control of Aggressiveness, psychological treatment, and medical treatment for consumption, since with these programs it will be possible to prevent or reduce violence (Flores, 2019).

### **Violence, gender violence**

There are many definitions of violence, the World Health Organization (WHO) defines it as the "use of physical force or can be understood by unequal power relations, either in a threatening (passive action) or effective (active action) degree, against oneself, third parties, group, community, society and collectives, causing injury, death, damage and psychological impacts, developmental disorder or deprivation" (WHO, 2002). Based on this definition our country has been characterized by high percentages of violence, specifically violence has been focused towards women, which according to INE (2018) acts of violence increased in 2017 to a total of 11,971 complaints made by women victims of violence (INE, 2018 as quoted in Flores 2019).

Gender violence is defined as any direct action exercised by a man against a woman. This action regularly takes place in emotional relationships such as: cohabitation, dating, marriage, etc. The most common violence is physical, which can cause serious and severe injuries and even death; it can also be psychological and emotional, exercised through verbal aggression or threats (Lamas, 2002).

The law against Femicide and Other Forms of Violence against Women Decree 22-2008

(LCFYOFVCM) is the response proposed by the State of Guatemala in 2008, in order to guarantee the protection of women against violent acts by creating three criminal types that did not exist: a) Femicide, b) Violence against women and c) Economic violence. This law has granted an invaluable guarantee, in which every woman, regardless of her age, can fully enjoy her rights of freedom, integrity, dignity, protection and equality, in order to live a violence-free life.

In Article 3 of the mentioned legal framework, subsection j) defines violence as: "Action or even omission based on what is conceptually defined as the pertinence of the female sex, resulting in immediate and, in some cases, subsequent harm, including other forms of harm such as physical, sexual, economic, emotional, psychological, among others, to women. Threats of such acts, coercion, or arbitrary deprivation of liberty, whether occurring in the public or private sphere, are also actions or acts that inherently involve violence" (The Law Against Femicide and Other Forms of Violence Against Women, Decree 22-2008, as quoted in Flores, 2019). It is worth noting that this legal instrument, in its broad definition, references the power dynamics and inequality inherent in traditional gender roles (Flores, 2019, p. 29).

Among the types of violence established by the Law Against Femicide and Other Forms of Violence Against Women in Guatemala (2008), Chapter II in Article 3, lists the following categorizations:

Table 1. Types of violence in Guatemala and their definitions

Types of violence in Guatemala and their definitions	
Economic violence	"Actions or omissions that have repercussions on the use, availability or accessibility of a woman to material goods that belong to her by right, by marriage or de facto union, by capacity or by inheritance, causing deterioration, damage, transformation, subtraction, destruction, retention or loss of objects or material goods belonging to her or to the family group, as well as the retention of work instruments, personal documents, goods, values, rights or economic resources" (LCFYOFVCM, art. 3, paragraph k).
Physical violence	Actions of aggression in which direct physical force is used or by means of any other object, weapon or substance with which harm, physical suffering, injury or illness is caused to a woman" (LCFYOFVCM, art. 3 literal l).
Psychological and emotional violence	"actions that can produce psychological or moral damage or suffering to a woman, her daughters or sons, as well as actions, threats or violence against the daughters, sons or other relatives up to the fourth degree of consanguinity and second degree of affinity of the victim, in both cases with the aim of intimidating her, undermining her self-esteem or controlling her, who subjected to this emotional climate can suffer a progressive psychological weakening with depressive symptoms" (LCFYOFVCM, art. 3 literal m).
Sexual violence	"Actions of physical or psychological violence whose purpose is to violate the freedom and sexual indemnity of women, including sexual humiliation, forced prostitution and denial of the right to make use of family planning methods, both natural and artificial, or to protect against sexually transmitted diseases" (LCFYOFVCM, art. 3, letter n).

Source: Conceptual table elaborated with conceptual inputs from the Law against Femicide and Other Forms of Violence Against Women (LCFYOFVCM) in Guatemala, 2008.

According to Flores (2019) the aggressor is the figure who exercises violence to women, male abusers can be profiled with common traits in their majority, such as low self-esteem, lack of assertiveness and emotional dependence. Holtzworth-Munroe (2001) and Echeberúa, (2009) coincide in their analyses, determining that all cognitive schema of a hostile and degrading type towards women, macho acts, even all inappropriate feelings about oneself or

towards one's partner, jealousy, among others, will refer to cognitive mechanisms that could be altered and and be affected to a greater extent by the ingestion of alcohol, drugs and other binding substances thus causing violent behavior to increase towards women (Flores, 2019). For this reason, the present study was considered in order to determine the cause and types of aggression that motivate the aggressive reaction of men towards their partners.

## Method

### Participants

The study was carried out taking a representative sample of 20 men, prosecuted for the crime of violence against women in its physical manifestation, who are linked to criminal proceedings in the "Specialized Body for Femicide and Other Forms of Violence against Women", in the municipality and department of Guatemala. We worked with an intentional and random sample, with voluntary participation, which means that the participants responded affirmatively to the invitation made by the researcher. It is also clarified that no age range was considered since the sample of participants included men who attended their hearings; the only requirement established was that the participants could read and write.

### Procedure

The evaluation of each participant was carried out individually, using an informed consent to participate in the study, in which a scale and a survey specifically designed to collect specific information for this study were applied.

A category tree was developed to identify the most important elements to describe the causes, types of aggressiveness and recidivism of the participants. The questionnaire was applied for the defendants over a period of three days in the month of November 2018, while they attended the hearing on the 5th, 6th and 7th from eight in the morning to three in the afternoon.

The Buss and Perry Aggressiveness scale was administered on the same days in the month of November 2018, In this case, the participants were asked if they were willing or able to fill them out themselves, in case they were not, they were supported with the

filling out of it.

The research was of a qualitative nature and the results obtained from the application of the instruments were analyzed in the light of descriptive statistics in order to determine the types of aggressiveness, identify the causes of reaction and violent recidivism of the participants. Content analyses were conducted with the support of matrices designed to collect information based on the results collected in the questionnaire instrument, with a sample of 20 participants (in syndicated situations).

This information gathering tool was structured with a total of 12 response columns which allowed the researcher to properly analyze the information provided in the data collection tools.

### Tools

- A questionnaire was designed, which included 12 items, following a direct question format. The purpose of the questionnaire was to determine the causes of aggressive behavior in the men who participated in the aforementioned study, in relation to criminal recidivism, and also to ascertain whether the participants have been referred to any anger management or emotion control programs since the start of their process.

- For the development of this study, the Buss and Perry Aggression Questionnaire, designed in 1992, was implemented. The scale consists of 29 items that assess four aspects of aggression in individuals: a) physical aggression (9 items), b) verbal aggression (5 items), c) anger (7 items), and d) hostility (8 items), which are measured using a Likert scale based on four points, where the scores correspond to: 1 is strongly disagree; 2 is disagree; 3 is agree, and 4 is strongly agree (Smith-Castro, 2014).

**Results**

The results obtained in the research as reported by Flores (2019) determined that aggressiveness and violent behavior in the individuals who participated in the study are not established, as the majority of participants did not experience violence or come from a violent family background. In contrast to what La Torre (2006) suggests, who states that the primary social context influencing people's aggressive behavior is associated

with childhood experiences and family influence, largely resulting in learned responses from behaviors observed in their parents (Flores, 2019). From the above, it is established that social and cognitive factors in aggressive behavior result from a condition of maladaptation, originating from issues in information encoding that hinder the development of alternative responses (Mezquita, 2007, as cited in Flores, 2019, p. 53).

Table 2. Aggressiveness, syndicated questionnaire

Questionnaire on aggressiveness to syndicate members		
QUESTION	MAJORITY TREND	SINGULARITIES
Do you remember if you witnessed aggression in your childhood, in your family or were you a victim of violence?	Response: NO. 14 out of 20 people "report that they do not remember witnessing or experiencing violence. One participant said: "I lived alone with my mother, she never treated me badly".	Response: YES. 6 out of 20 people "stated that they experienced or witnessed violence. One participant said; yes, on my father's side, he was an alcoholic and kicked us out of the house, after hitting us".

Source: Flores (2019, p.53).

Alcohol intake was also found to trigger an aggressive and violent reaction on the part of the subjects against their partners. However, the effects of alcohol mediate social and psychological factors, which can trigger an aggressive reaction, Gustafson, (1995).

Another result obtained from the analysis of the questionnaire is that most of them have restraining measures against them, and are in a criminal proceeding in the intermediate and debate stages, awaiting its completion. Recidivism is not evident since only one of the persons evaluated had already been convicted for the same crime.

Table 3. Aggressiveness, syndicated questionnaires

Questionnaire on aggressiveness to syndicate members		
QUESTION	MAJORITY TREND	SINGULARITIES
Did any partner file a complaint against you and were you granted security measures?	Response: YES. 15 out of 20 people answered that they currently have a restraining measure against them.	Response: NO. 5 out of 20 people have no security measures.

Source: Flores (2019, p.55).

Considering the results obtained in the study, it was observed that there is a need to implement programs, workshops and emotional support for men who are involved in criminal proceedings for the crime of violence against women in the specialized courts of the department and municipality of Guatemala.

The scale applied to each participant revealed that there is no significant difference between the four aspects evaluated in the instrument. Physical aggression, verbal aggression, and anger were all found to be within the average range. However, the factor of hostility exceeded the average in the respondents' answers.

*Table 4. Results of the Buss and Perry Aggression Scale (types of aggressiveness) based on the respondents' reactions toward their partner.*

Results of the Buss and Perry Aggression Scale (types of aggressiveness) based on the respondents' reactions toward their partner.					
DESCRIPTIVE STATISTICS	PHYSICAL AGGRESSION	VERBAL AGGRESSION	ANGER	HOSTILITY	TOTAL VARIABLES
AVERAGE	14.7	9.5	13.65	16.1	53.95
MODE	10	12	13	18	63
STANDARD DERIVATION	4.040583595	2.724160904	3.1501187964	4.241399967	12.513004582
VARIANCE	16.32631579	7.421052632	9.923684211	17.98947368	153.5763158
RANGE	13	9	11	15	43

Source: Flores (2019, p.55).

As can be observed in the table, each variable has scores obtained from the application of the scale, and each variable measures the types of aggression exhibited by the participants. Physical Aggression is understood as physical injuries of any kind, Verbal Aggression includes manifestations like insults, morally inappropriate words, devaluation, etc. Anger is understood as a negative emotion, and Hostility refers to negative actions taken by individuals to respond defensively with aggression.

Regarding the results obtained, for the Physical Aggression factor, a maximum

score of 32 was obtained, indicating that the sample is below this score. This suggests that the individuals who participated in the study do not react with physical aggression, and there is no significant deviation, as the data reflect that the result is within the average range.

For the Verbal Aggression factor, the maximum score was 20, indicating that the respondents are well below this score. This suggests that there are no insults, shouting, belittling, or humiliation towards their partner, and the standard deviation does not show a significant difference, indicating that it is below the average.

Both variables; physical and verbal aggression are proposed by the authors as the instrumental component of aggressive behavior, as described by Reyna, Sanchez and Brussino, (2011). Reyna, Sanchez and Brussino, (2011).

Anger factor: which involves physiological activation and represents the emotional component. It functions as a bridge between the instrumental and cognitive components of aggressive behavior according to Buss & Perry (1992). The maximum score is 24, indicating in this result that those evaluated exceeded the mean, giving a tendency of increase in this factor, reflecting that those evaluated use this behavior more often within the couple relationship; however, the standard deviation did not go beyond the curve, despite being in a higher range.

Hostility factor: which involves feelings of disagreement and injustice, and therefore represents the cognitive component of aggressive behavior. The score obtained was the maximum 28 of the variable, indicating that the results exceeded the mean, evidencing a tendency of those evaluated to react defensively, and that they are with aggressive and hostile reactive behaviors both in their environment and towards their partner, the deviation is within a higher range.

It is noteworthy that the factor of physical aggression is at a low level within the sample, which suggests that those evaluated do not react with physical aggression, but with feelings of hostility, being defensive, and whose most common reaction used would be verbal and psychological aggression.

## Discussion

Both instruments revealed results that, when combined, provide insight into the

aggressive tendencies of the respondents. They reflect possible causes of these aggressive behaviors, determining that family upbringing and childhood experiences do not seem to be significant factors influencing aggressive behavior, contrary to what La Torre (2006) theorizes. Similarly, parental role modeling does not appear to be a conditioning factor. Aggressive behavior is more likely to originate from impulse, involving neurophysiological aspects of the brain where reactions are more primitive than rational, as suggested by Stahl, as cited by Sepúlveda and Moreno (2017), regarding emotional hypersensitivity and exaggerated perception of threatening stimuli. Therefore, the development of alternative behaviors to manage emotions such as frustration is essential.

It is established that the consumption of alcohol or other substances serves as a trigger for men to react aggressively toward those around them, according to Lorete and Toquero (2014), with the regular target of aggression being the partner (the female victim) who receives mistreatment from the man.

The type of aggression evident in the sample is primarily hostile behavior, as proposed by Buss and Perry (1991), representing the rational component, with anger as the emotional component acting as a bridge to the use of instrumental components. Therefore, the analysis of the applied instruments aligns with the more frequent use of verbal or psychological aggression. The data cannot be generalized to all men who engage in violence, as Mezquita (2007) points out, because the personality traits of each man who engages in violence are different.

It is considered of great importance to create specific programs for anger management since there is currently none. The willingness of the evaluated individuals

to participate in such programs, workshops, training, and talks is evident. These programs could provide information, knowledge, and strategies for improving responses related to anger and hostility, ultimately enhancing their family, work, and social relationships.

Guatemala has the highest rates of violence against women among Latin American countries. It was expected that the sample would reflect a high level of physical aggression. However, the evaluated individuals do not resort to physical violence to resolve conflicts. However, when under the influence of alcohol or drugs, they do react violently toward their partners, with the majority of incidents involving intoxicated men reacting aggressively. This behavior is not justified, but alcohol or drug use are contributing factors to violent reactions.

According to Sarasúa (1994), the lack of state programs for adequate treatment and control of emotions, anger, or aggression in men who commit violence against women in its physical manifestation (VCMF) is a significant issue. Specific support from the Guatemalan government for the treatment of these behaviors is necessary, to be used by the judicial system as complementary resources to handle cases from an early stage to sentencing. The purpose of these actions would contribute to the prevention of violence against women in its physical manifestation and recidivism, ultimately increasing the chances of reducing reports, with the goal of dignifying women and allowing them to live a "life free of violence."

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### About the author

**Brenda Beatriz Flores Luna** is a Master in Psychology, graduated from the University of San Carlos de Guatemala, Bachelor in Clinical Psychology, graduated from the University Rafael Landivar; with 18 years of experience in the justice sector, in the family field and currently in the criminal field, as a psychologist, working with women, children and teenagers victims of physical, psychological, sexual and economic violence, as well as sexual crimes in Guatemala.

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I declare that I have no conflicts of interest that could have influenced the results obtained or the proposed interpretations.

### Informed Consent Statement

The study was conducted in compliance with the Code of Ethics and Good Publishing Practices.

### Derecho de uso

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## Locus of control and aggression in University of San Carlos students, central campus

### *Locus de control y agresión en estudiantes de la Universidad de San Carlos, sede central*

Francisco José Ureta Morales   
Universidad de San Carlos de Guatemala  
fureta@psicousac.edu.gt

Mavis Rodríguez   
Universidad de San Carlos de Guatemala  
mrodriguez@psicousac.edu.gt

Elena María Soto Solares   
Universidad de San Carlos de Guatemala  
esoto@psicousac.edu.gt

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#### Abstract

The research problem addressed in this study is to know the levels of aggression and type of locus of control of the students of the USAC, for which the present study was raised in 8 Academic Units. The Locus of Control (LOC) scale was applied electronically, adapted for adults from the version for adolescents, including the “Buss and Perry Aggression Questionnaire” model. A descriptive, cross-sectional and comparative design was applied, based on quantitative methodology. Likewise, a two-stage sampling was applied, random selection of the 8 academic units and then cluster sampling in the classrooms of second, sixth and tenth semester students, 1,344 students participated. In the internal LOC there are no differences by semester of studies ( $p > .050$ ) and students between 30 and 35 years old have a lower average ( $p < .50$ ). For the external LOC of the second semester, it is higher and reduces as the semesters of study progress ( $p < .050$ ), and a student between 30 and 35 years of age with a higher average; the external LOC increases with increasing age ( $p < .50$ ). The aggression variable indicated that students in the tenth semester have a lower GPA ( $p < .001$ ) and from 30 to 35 years with less aggression, it decreases as age increases ( $p < .001$ ). Results that coincide and contrast with previous research consulted and will be a contribution to Guatemalan psychology; it is suggested to include it in the programs of accompaniment and psychological attention of the students.

#### Keywords

Perception of control, internal LOC, external LOC, aggression, aggression evaluation

#### Resumen

El problema de investigación abordado en este estudio es conocer los niveles de agresión y tipo de locus de control de los estudiantes de la USAC, por lo que se planteó el presente estudio en 8 Unidades Académicas. Se aplicaron por la vía electrónica la escala de Locus de Control (LOC), adaptadas para adultos de la versión para adolescentes, incluyendo el modelo de “Cuestionario de Agresión de Buss y Perry”. Se aplicó un diseño de tipo descriptivo, transversal y comparativo, con base en la metodología cuantitativa. Así mismo, se aplicó un muestreo bietápico, selección aleatoria de las 8 unidades académicas y luego muestreo por conglomerados en las aulas de estudiantes de segundo, sexto y décimo semestres, participaron 1,344 estudiantes. En el LOC interno no hay diferencias por semestre de estudios ( $p > .050$ ) y los estudiantes de 30 a 35 años lo tienen en menor promedio ( $p < .50$ ). Para el LOC externo del segundo semestre es mayor y se reduce al avanzar en los semestres de estudios ( $p < .050$ ), y estudiante de 30 a 35 años con mayor promedio; el LOC externo aumenta con mayor edad ( $p < .50$ ). La variable agresión indicó que los estudiantes del décimo semestre tienen menor promedio ( $p < .001$ ) y de 30 a 35 años con menor agresión, se reduce conforme aumenta la edad ( $p < .001$ ). Resultados que coinciden y contrastan con anteriores investigaciones consultadas y será un aporte a la psicología guatemalteca; se sugiere incluirlo en los programas de acompañamiento y atención psicológica de los estudiantes.

#### Palabras clave

Percepción de control, LOC interno, LOC externo, agresión, evaluación agresión

## Introduction

The variables of aggression and LOC are poorly investigated by USAC students, only one study was identified addressing fate control in college students that included USAC (Luna et al., 2021), both variables have relevance to mental health. High levels of aggression could increase aggressive behaviors in the university setting and, have implications for student performance. For the LOC, it is necessary to identify the type of LOC they present, internal or external, in order to attend to the educational processes as a reference element. It is also necessary to inquire about both variables in specific groups of students, workers and non-workers, by age intervals and marital status. These comparisons allow the identification of those groups in need of mental health care, as well as the planning programs and projects of student care for success and failure within the university environment.

The Locus of Control construct was developed by Rotter in 1966 as quoted by Visdómine-Lozano (2006):

If the person is able to perceive that the event is contingent with his behavior or even with his own permanent characteristics, it will be understood to be a belief in internal control, [on the other hand] when an effort perceives a personal action, but not being entirely contingent with it, in our culture it will be perceived, as the result of luck, in other words, therefore, it has been said to be a belief in external control (p. 731).

Rotter developed a Locus of Control scale, where reinforcement, reward, or gratification can be recognized as crucial in the acquisition and performance of skills, abilities, and knowledge (Ureta et al., 2022, p.13). However, the perception will vary from person to person, depending on whether the reinforcement is under the control of others or the forces surrounding it.

In the words of Rotter (1966) cited by Visdómine-Lozano (2006), it is possible to assert that there is a belief in external control, meaning that if a person perceives that the event depends on their behavior permanently, this has been called a belief in internal control (Ureta et al., 2022, p. 13).

Quoting Mayora-Pernía and Fernández (2015), "LOC has evolved from being a dichotomous variable to a multidimensional one; some research shows a relationship between LOC and academic performance in higher education. Therefore, the results reflect the need to address this issue in Latin America" (Ureta et al., 2022, p.11). Johnson et al. (2015) suggested that job performance is related to certain variables influencing LOC and personality.

Studies by Koeske & Kirk 1995 and Rees & Cooper 1992, cited by Oros (2005), have suggested that individuals with an internal LOC tend to have better job quality, high job satisfaction, lower emotional fatigue, and lower rates of workplace conflicts, among other factors (p.91). In studies correlating education and LOC, Mexico analyzed a factorial scale in university students (Bibiano et al., 2016), and Costa Rica, using a validated and standardized measurement instrument, showed some results with adolescents (Smith-Castro, 2014).

On the other hand, the category of aggression is considered multifactorial in the literature; it is regarded as a behavior that is harmful, intentional, and aversive. "On some occasions, it has an assertion of dominance, where the subject seeks to eliminate everything that threatens what they believe should exist" (Fang & Hoyos, 2009 as cited in Ureta et al., 2022, p.15). Several definitions of aggression have been developed, and three elements are common in them: a) its intentional nature, b) the aversive consequences it has on object or other people, including oneself, and c) its

expressive variety, manifesting in multiple ways (Carrasco and Gonzáles, 2006).

Most studies on this construct have been conducted in psychiatric, forensic, neurological, and criminological fields (Castellano and Castellano, 2012). Researchers do not have enough instruments contextualized to Latin American realities; therefore, they opt for the use of international instruments (López and Orpinas, 2012). It should be noted that the school, family, and technological environments are variables that promote studies on aggression with the purpose of countering high violence rates in Latin American countries (Castellano & Alonso, 2006 as cited in Ureta et al., 2022, p. 18). In the case of Guatemala, it is a little-studied topic but has gained importance with studies on aggression in school settings. A survey was conducted with a sample of 18,780 sixth-grade students in 993 official educational centers, of which 8% of the students reported being constant victims of group aggression, which is the most common form of aggression (Gálvez-Sobral, 2011).

There are studies that relate LOC and aggression in Latin America and Spain. Niño (2019) found a moderate positive correlation between LOC and aggressive behavior in psychology pre-professional practice students in Peru. Bouquet and Reidl (2017) analyzed some factors intervening in aggressiveness in Mexican adults and found that a lack of control, magical thinking, inefficacy, and fatalism as components of LOC are predictors of aggression. They concluded that negative self-evaluation or a lack of perception of control over the environment, as well as personality characteristics associated with emotional instability and a tendency to stress, tend to facilitate the development of not only aggressive thought patterns but also aggressive behaviors (Bouquet et al., 2017,

p. 117). Finally, González-García et al. (2014) found a positive correlation between external LOC and external expressions of anger, trait anger, and reaction anger. They concluded that having a greater external LOC is related to higher levels of anger in adult table tennis players in Spain. Therefore, there is a tendency to associate both variables, and this research will contribute to increasing evidence of the relationship between LOC and aggression.

This study was conducted in 2021 in eight academic units of USAC at its central campus in Zone 12 of Guatemala City. It utilized a quantitative methodology with the application of two psychometric instruments. Its aim was to investigate, analyze, and present how internal and external LOC variables and aggression behave in groups of university students at USAC. It provides results about the sampled students and comparisons between different age groups, working status, marital status, and the semester they are studying. These interactions were not previously documented, making them relevant for consideration in the planning and implementation of psychological support and counseling programs for students.

## Materials and Methods

A quantitative method with a quantitative analytical-explanatory approach was applied, using a descriptive, cross-sectional, and comparative design. A two-stage sampling was carried out, with the random selection of 8 academic units and cluster sampling in classrooms of students from the specified semesters, with voluntary participation from students who wished to participate electronically. The first stage was random, selecting 8 academic units out of the 18 academic units at the USAC central campus, Excluding the School of Psychological Sciences, where the instrument pilot testing took place. A confidence level of 95%

resulted in a sample confidence value of 26.57, which is very low for generalizing to the entire USAC central campus population, so the analyses are confined to the obtained sample only. The second stage was non-random, based on convenience, as efforts were made in each of the selected units to have students in the second, sixth, and tenth semesters of their degree programs complete the instruments. Since participation was voluntary for those who expressed interest, the sampling was not random.

The sample that provided the information consisted of 1344 students from eight randomly selected academic units at USAC: the Faculty of Chemical and Pharmaceutical Sciences, the School of Science and Technology of Physical Activity and Sports (ECTAFIDE), the Faculty of Architecture, the Faculty of Humanities, the Faculty of Veterinary Medicine and Animal Science, the Faculty of Economic Sciences, the Faculty of Dentistry, and the School of History. In terms of the sample selection process and characteristics, it should be noted that the participants were students aged between 18 and 35, enrolled in the second semester of 2021, in the second, sixth, or tenth semester of their programs, who provided voluntary consent for participation through the virtual instrument.

## Instruments

### Sociodemographic Data Survey

At the beginning of the instruments, the following sociodemographic variables were included to specify the type of student who completed them: whether they were enrolled at USAC in the second semester of 2021, schedule, gender, academic unit, employment status, semester of enrollment, age, marital status, and cultural group.

### Adolescent Locus of Control Scale

To assess the internal-external LOC of the

students, the Adolescent Locus of Control Scale was used. The instrument was adapted for adults by Villalobos and Campos in 2009, as cited by Smith-Castro (2014). The scale consists of 15 Likert-type questions with four points where 1 is (not at all), 2 is (a little), 3 is (quite), and 4 is (very much). Seven of the questions measure external control, and 8 measure internal control. The results are obtained based on the sum of the items, with high scores indicating high levels of external or internal locus of control, depending on the case.

### Buss and Perry Aggression Questionnaire

The Buss and Perry Aggression Questionnaire from 1992, adapted in the Costa Rican context by Brenes in 2009 and cited by Smith-Castro (2014), was applied to investigate aggression in different age groups. The final version consists of 29 Likert-type items with 4 points, where 1 is (totally disagree), 2 is (disagree), 3 is (agree), and 4 is (totally agree). The questionnaire comprises four subscales that represent physical and verbal aggression, anger, and hostility (Smith-Castro, 2014). For the application of both instruments, the respective authorization was requested, considering all ethical considerations in research.

## Procedure

In the pilot test conducted at the School of Psychological Sciences with 75 students of both genders, participants were asked to respond to the three aforementioned scales. Upon analyzing the instruments using Cronbach's Alpha, the following results were obtained: an external LOC of 0.645 and an internal LOC of 0.863, both of which align with those reported by the authors (Villalobos and Campos in 2009, cited by Smith-Castro in 2014). Regarding the Aggression Scale, the results showed a consistency of 0.921, which

is consistent with what the author (Brenes in 2009, cited by Smith-Castro in 2014) presented. The internal consistency of the instruments applied in the pilot and final administration was analyzed using Cronbach's Alpha, and since the questions were more similar, there was a higher level of internal consistency for the questions within each instrument. This index should be greater than or equal to 0.6. The formula can be found in Celina and Campo in 2005, as cited by Ureta (2021, p. 26).

For the final administration, communications and visits were conducted with the responsible individuals at the eight randomly selected academic units. Once positive responses were received, they were sent the links for the participants to complete the instruments online. These links were placed on the virtual platforms of each academic unit to ensure that they would be completed by their students. Upon completing the administration of the instruments, a letter of appreciation was sent to the participating academic units, thanking them for the permissions and support provided for the fieldwork.

### Data Processing and Analysis

Both scales were placed on the SurveyGizmo web platform to be filled out by the students. After the data collection period concluded, the database was obtained in Excel format for analysis using SPSS software. Data cleaning was performed, and cases that did not meet the established criteria were excluded. The original source (online questionnaires) was reviewed to identify outliers, missing values, and some inconsistencies in the information and data obtained.

The internal consistency of the instruments in the final administration was calculate using Cronbach's Alpha coefficient, with the

following results: Internal LOC had a value of 0.79, which decreased compared to the pilot (0.863), but its results remained consistent and reliable, with no items showing negative loadings or correlations in the scale. External LOC had a value of 0.837, which increased when compared to the pilot (0.645), and its results were also consistent and reliable, with no items showing negative loadings or correlations in the scale.

The Aggression Scale obtained a value of 0.896, which decreased compared to the pilot (0.921), but its results remained reliable and consistent. Items 4 and 15 loaded negatively on the scale; however, they were not removed to include both results in the study. Descriptive statistics (means and standard deviations) were calculated for the three assessed variables, along with Student's t-tests for mean differences and Analysis of Variance (ANOVA) for three or more groups. To confirm the differences in ANOVA, the Bonferroni post hoc test was performed, designed to adjust the error based on the number of comparisons made (all tests with  $p < 0.05$ ). It compares the means of t-levels for a factor after rejecting the null hypothesis ( $H_0$ ) that indicates equal means following ANOVA calculation. In this calculation, the  $\alpha$  value must be divided by the number of planned comparisons (Dagnino, 2014 and Scientific European Federation of Osteopaths, 2019).

### Ethical Considerations

Informed consent was obtained from the participants through an instrument specifically designed for this purpose. They were informed that their participation and completion of the instrument were voluntary, and they had the right to withdraw at any time. Responding to the instruments incurred no cost or harm to the students who chose to participate. The confidentiality of the information was ensured and used solely for the purposes of this research. Identifies and

the information obtained were not disclosed to anyone outside the research team. Ethical approval was obtained through the Bioethics Committee for Health Research at USAC prior to the execution of the study.

## Results

The instruments were completed by 1,344 students who met the inclusion criteria as previously mentioned. The sample was predominantly composed of females, with 1,026 students, representing 76.3% (Table 1). The sample was drawn from students in the eight selected academic units, including the Faculty of Humanities, Chemical and Pharmaceutical Sciences, Economic Sciences, Veterinary Medicine and Animal Science, Dentistry, as well as the School of History and ECTAFIDE.

The sample included both working and non-working students, with 745 working students accounting for 55.4%. The sample predominantly consisted of students in the second semester, totaling 415 (46.2%), while 386 students (28.7% of the total participants) were enrolled in the tenth semester. The sample included a higher number of students aged 18 to 23, accounting for 43.7%, and the 24 to 29 age group made up 29.8% of the sample. In terms of marital status, singles predominated with 1,031 students (76.7%). The majority of the sample identified as Ladino, totaling 985 (73.3%). 262 students identified as Mestizo, similar to Ladinos, making up 19.5% of the sample, while the remaining 7.2% identified as Xinca, Garifuna, Maya, or from another cultural group.

Table 1. Students by gender and Academic Unit who responded to the instruments.

Academic Unit	Gender						Total	
	Male		Female		Other		F	%
	F	%	F	%	F	%	F	%
Faculty of Humanities	83	6.2	577	42.9	0	0.0	660	49.1
Faculty of Chemical and Pharmaceutical Science (FCQQFF)	98	7.3	275	20.5	0	0.0	373	27.8
Faculty of Architecture	34	2.5	55	4.1	1	0.1	90	6.7
ECTAFIDE	48	3.6	41	3.1	0	0.0	89	6.6
School of History	31	2.3	42	3.1	1	0.1	74	5.5
Faculty of Economic Sciences	12	0.9	19	1.4	0	0.0	31	2.3
Faculty Veterinary Medicine and Animal Science (FMVZ)	8	0.6	8	0.6	0	0.0	16	1.2
Faculty of Dentistry	2	0.1	9	0.7	0	0.0	11	0.8
Total	316	23.5	1026 <sup>a</sup>	76.3	2	0.1	1344	100.0

Note: Prepared by Ureta et al., 2022.

According to the results and analyses conducted by Ureta et al. (2022), the average internal LOC was 13.67, which is low when compared to the maximum possible score of 32 points, with each question having a maximum score of 4. The external LOC had an average of 21.87,

close to the scale's maximum of 28 points, indicating a stronger orientation toward external LOC in the sample. The average score on the aggression scale was 59.75 out of a maximum of 112 points, indicating moderate aggression as it just surpasses the halfway mark (Table 2).



Table 2. Descriptive statistics of the measured variables on the scales.

Variables	N	Minimum	Maximum	Mean	Scale Maximum <sup>a</sup>	Standard deviation
Total, internal LOC	1,342	8.00	27.00	13.67	32	3.68
Total, external LOC	1,341	7.00	28.00	21.87	28	3.84
Total, aggression scale	1,286	31.00	109.00	59.75	112	13.67

Note: a. This column represents the maximum possible score for each scale. Compiled by Ureta et al., 2022.

Regarding the comparison of students' internal LOC, the means of working students and non-working students were compared using a Student's t-test. Non-working students ( $M=14.10$ ,  $SD=3.75$ ,  $N=598$ ) were compared to working students ( $M=13.32$ ,  $SD=3.58$ ,  $N=744$ ). Assuming equal variances,  $F=0.747$ ,  $t(1340) = 3.873$ ,  $p < .001$ , which indicates a statistically significant difference between the two means. Therefore, it can be concluded that non-working students have a higher internal LOC than working students, and the effect size of this difference is moderate, with Cohen's  $d$  of 0.77, 95% CI [0.38, 1.17].

Next, the average internal LOC was compared with ANOVA based on the students' semester of enrollment for three different groups. Students on the annual plan were not included as they were too few, and their results might be unreliable, so they were excluded from all comparisons. In the second semester, the mean was ( $M=13.782$ ,  $SD=3.63$ ,  $N=620$ ), in the sixth semester, it was ( $M=13.785$ ,  $SD=3.72$ ,  $N=326$ ), and in the tenth semester, it was ( $M=13.400$ ,  $SD=3.74$ ,  $N=385$ ). There was no statistically significant difference between the groups, and the effect size was almost non-existent,  $F(2) = 1.478$ ,  $p = 0.228$ ,  $\eta^2 = 0.007$ . The assumption of homogeneity of variances among the three groups was verified (Levene  $F(2) = 0.406$ ,  $p = 0.666$ ), indicating that the means were equal. The Bonferroni post hoc test also confirmed that there were no differences between the three means.

The average internal LOC was compared with ANOVA by student-reported marital status for three different groups, widowed students were not included because they are very few and their results could be unreliable, they were excluded from all comparisons.

Married students had an average ( $M=13.15$ ,  $SD=3.51$ ,  $N=240$ ), unmarried students had an average ( $M=12.92$ ,  $SD=3.24$ ,  $N=71$ ), and single students had an average ( $M=13.84$ ,  $SD=3.72$ ,  $N=1,029$ ). A statistically significant difference was observed between the groups, with an almost non-existent effect size,  $F(2) = 4.979$ ,  $p = 0.007$ ,  $\eta^2 = 0.002$ . The assumption of homogeneity of variances among the three groups was confirmed (Levene  $F(2) = 1.127$ ,  $p = 0.324$ ), indicating that the means were different. Bonferroni's post hoc analysis indicated differences in the means between married and single students ( $p = 0.026$ ), with single students having the highest mean.

The average internal LOC was compared with ANOVA based on the age reported by the students, divided into three groups. The group of 18 to 23 years had a mean of ( $M=14.05$ ,  $SD=3.80$ ,  $N=587$ ), the group of 24 to 29 years had a mean of ( $M=13.62$ ,  $SD=3.84$ ,  $N=399$ ), and the group of 30 to 35 years had a mean of ( $M=13.10$ ,  $SD=3.14$ ,  $N=356$ ). A statistically significant difference was observed between the groups, and the effect size was almost non-existent,  $F(2) = 7.528$ ,  $p = 0.001$ ,  $\eta^2 = 0.011$ . The assumption of homogeneity of variances among the three groups was not met (Levene  $F(2) = 8.473$ ,  $p = 0.001$ ), indicating different means among

the groups. The Bonferroni post hoc test showed differences in means between students aged 18 to 23 and those aged 30 to 35 ( $p = 0.001$ ), with the latter having the lowest mean. It could be concluded that internal LOC decreases as age increases.

The next variable analyzed was the external LOC of the students, the same comparisons were made as with the internal LOC, first the averages of those who work were compared with those who do not with Student's *t* test, the averages were those who do not work ( $M=21.18$ ,  $SD=3.90$ ,  $N=597$ ) and those who do work ( $M=22.43$ ,  $SD=3.71$ ,  $N=344$ ). Assuming equal variances,  $F = 1.326$ ,  $t(1339) = 6.004$ ,  $p < .001$ , which indicates that the two averages have a statistically significant difference, this result showed that those who work have a higher external LOC than those who do not; the effect size of this difference is large, Cohen's  $d=-1.25$ , 95% CI [-1.66, -.84].

Comparison of the average external LOC was made with ANOVA according to the semester taken by the students for three different groups. In the second semester an average was obtained ( $M=22.28$ ,  $SD=3.52$ ,  $N=619$ ), in the sixth semester it was ( $M=21.62$ ,  $SD=3.99$ ,  $N=326$ ) and in tenth semester ( $M=21.49$ ,  $SD=4.14$ ,  $N=385$ ). If a statistically significant difference was obtained between groups and the effect size is almost nonexistent  $F(2) = 6.218$ ,  $p = 0.002$ ,  $\eta^2 = .009$ , the assumption of homogeneity of variances of the three groups was not tested, Levene  $F(2) = 4.411$ ,  $p = .012$ , indicating that the averages are different. The Bonferroni post hoc test was done which evidenced that the second semester is different from the sixth and tenth semesters ( $p = .026$ ,  $p = .005$ ), between the average of the sixth and tenth semesters there is no difference ( $p = 1.00$ ). The second semester has the highest average and decreases as the semesters advance.

The average external LOC was compared with ANOVA by students' marital status for three different groups. The married reached an average ( $M=23.07$ ,  $SD=3.51$ ,  $N=240$ ) that of the unmarried was ( $M=24.02$ ,  $SD=3.24$ ,  $N=71$ ) and the single ( $M=21.46$ ,  $SD=3.72$ ,  $N=1,028$ ). If a statistically significant difference between groups was obtained and the effect size is almost nonexistent  $F(2) = 30.034$ ,  $p = 0.001$ ,  $\eta^2 = .043$ , the assumption of homogeneity of variances of the three groups was tested, Levene  $F(2) = 1.127$ ,  $p = .324$ , indicating that the averages are different. Carrying out the Bonferroni post hoc analysis evidenced that if there are differences in the averages of the unmarried with the married and the united ( $p = .001$ ,  $p = .001$ ), that of the united is equal to that of the married ( $p = .178$ ), the unmarried have the lowest average external LOC.

External LOC was compared with ANOVA by student age in three different groups. The group from 18 to 23 years old has an average ( $M=21.18$ ,  $SD=3.75$ ,  $N=586$ ) the group from 24 to 29 years old was ( $M=21.75$ ,  $SD=4.08$ ,  $N=399$ ) and from 30 to 35 years old ( $M=23.13$ ,  $SD=3.40$ ,  $N=356$ ). If a statistically significant difference was obtained between groups and the effect size is almost nonexistent  $F(2) = 29.881$ ,  $p = 0.001$ ,  $\eta^2 = .043$ , the assumption of homogeneity of variances of the three groups was not checked, Levene  $F(2) = 4.926$ ,  $p = .007$ , indicating that the averages are different. Carrying out the Bonferroni test showed that there are differences in the averages of those aged 18 to 23 and those aged 30 to 35 ( $p = .001$ ), the latter having the highest average, it could be affirmed that as age increases, external LOC also increases.

The final variable analyzed was the students' aggression level (answered by a smaller number of students). The same comparisons were made, including a Student's *t*-test for the means of working and non-working students. The mean for non-working students ( $M=60.32$ ,  $SD=3.90$ ,  $N=574$ ) was compared

to that of working students ( $M=59.29$ ,  $SD=3.71$ ,  $N=712$ ). Assuming unequal variances,  $F=7.695$ ,  $t(1171.04) = 1.333$ ,  $p < .183$ , indicating no statistically significant difference between the two means. Surprisingly, working students had an external LOC like that of non-working students, with a large effect size, Cohen's  $d$  of 1.032, 95% CI  $[-0.487, 2.553]$ , although the means showed no difference.

The comparison of the average aggression level was performed using ANOVA based on the students' semester of study for three different groups. In the second semester, an average of ( $M=60.94$ ,  $SD=13.46$ ,  $N=594$ ) was obtained, in the sixth semester, it was ( $M=60.24$ ,  $SD=13.42$ ,  $N=311$ ), and in the tenth semester, it was ( $M=57.35$ ,  $SD=13.96$ ,  $N=370$ ). A statistically significant difference was observed between the groups, with an almost negligible effect size,  $F(2) = 8.226$ ,  $p = 0.001$ ,  $\eta^2 = 0.013$ . The assumption of variance homogeneity among the three groups was confirmed (Levene  $F(2) = 0.138$ ,  $p = 0.872$ ), indicating that the means were different. The Bonferroni post hoc test revealed that the mean of the tenth semester was different from that of the sixth and second semesters ( $p = 0.017$ ,  $p = 0.001$ ), but there were no differences between the mean of the sixth and second semesters ( $p = 1.00$ ).

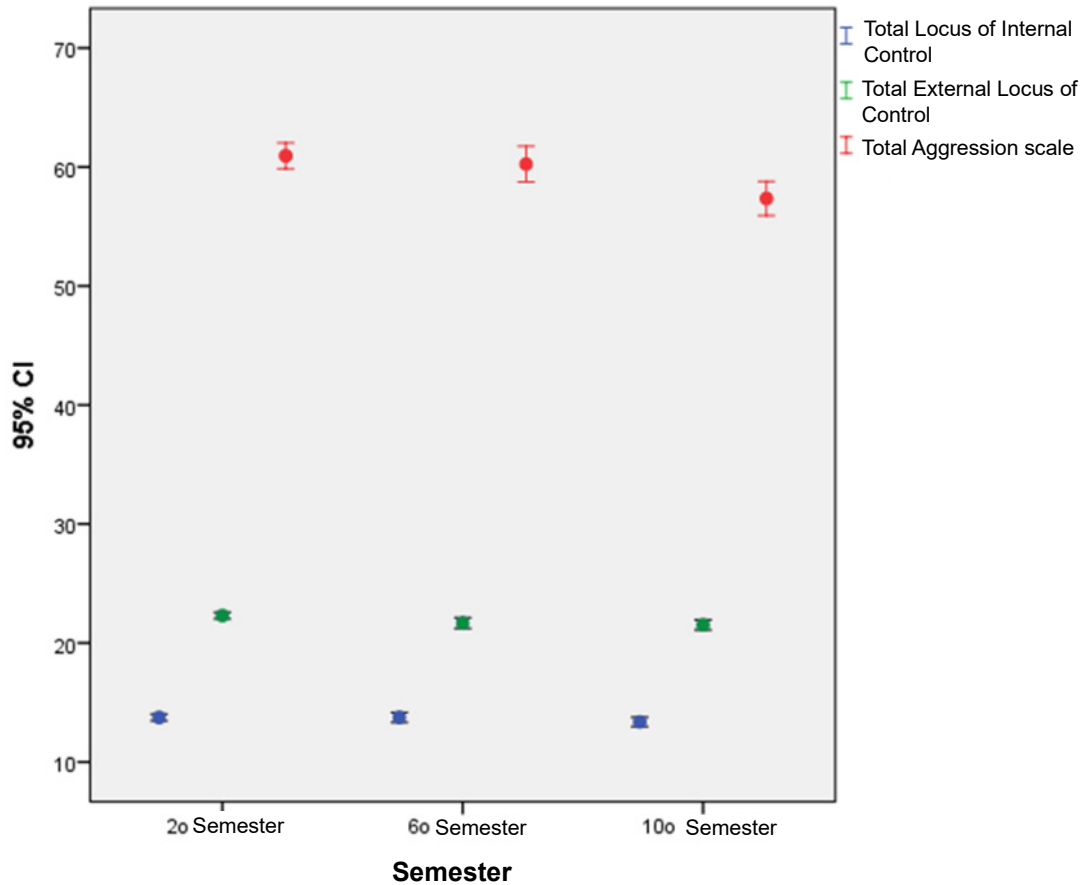
The tenth semester had the lowest average aggression, significantly decreasing in the last semester compared to the previous ones.

The average aggression level was also compared with ANOVA based on the marital status of the students. Married students had an average ( $M=56.16$ ,  $SD=13.23$ ,  $N=231$ ), the cohabiting (*unidos*) students had an average ( $M=61.63$ ,  $SD=14.52$ ,  $N=69$ ), and the single students had an average ( $M=60.46$ ,  $SD=13.57$ ,  $N=984$ ). A statistically significant difference was observed between the groups, with a nearly negligible

effect size,  $F(2) = 10.061$ ,  $p = 0.016$ ,  $\eta^2 = 0.043$ . The assumption of variance homogeneity among the three groups was confirmed (Levene  $F(2) = 0.343$ ,  $p = 0.709$ ), indicating that the means were different. The Bonferroni post hoc analysis indicated differences in the means between married students and single students, as well as between cohabiting and single students ( $p = 0.001$ ,  $p = 0.010$ ). The cohabiting students had the highest average aggression, while the cohabiting and married students had similar levels ( $p = 1.000$ ).

The final comparison of aggression was based on the students' age, using ANOVA for three groups. The group of students aged 18 to 23 had an average of ( $M=62.13$ ,  $SD=3.75$ ,  $N=559$ ), the group of students aged 24 to 29 had an average of ( $M=58.88$ ,  $SD=4.08$ ,  $N=381$ ), and the group of students aged 30 to 35 had an average of ( $M=56.88$ ,  $SD=3.40$ ,  $N=346$ ). A statistically significant difference was observed between the groups, with an almost negligible effect size,  $F(2) = 17.294$ ,  $p = 0.001$ ,  $\eta^2 = 0.026$ . The assumption of variance homogeneity among the three groups was not met (Levene  $F(2) = 0.526$ ,  $p = 0.591$ ), indicating that the means were different. The Bonferroni test showed differences in the means between students aged 18 to 23 and the other two groups ( $p = 0.001$ ,  $p = 0.001$ ). The mean of students aged 24 to 29 was like the mean of students aged 30 to 35 ( $p = 0.179$ ), with the latter having the lowest average, suggesting that aggression decreases as age increases. Variations and trends were identified in the studied variables, with increases or decreases by age group and semester of study. These trends were reflected in internal LOC decreasing, external LOC increasing, and aggression decreasing (Figure 1). All effect sizes calculated in the comparisons are small or non-existent, except for internal LOC between working and non-working students, which had a large effect size. Therefore, it can be concluded that the remaining differences are influenced by the size of the samples and compared groups.

Figure 1. Averages of Internal LOC, External LOC, and Aggression by Age Groups



## Discussion

The results obtained apply to the levels and status of the variables only within the sample of 1,344 participating students. While the initial sampling of Academic Units was random, the instruments were completed by students who expressed interest in participating in the study. The limited sample confidence value prevents the generalization of these findings to the central campus of USAC. The results represent an initial starting point, shedding light on these two variables among USAC students. The Locus of Control (LOC) variable comprises two dimensions: internal and external LOC. The average internal LOC within the total sample was 13.67, which is relatively low. This result

contradicts the findings reported by García-Campos and García-y-Barragán (2011), who indicated a higher internal LOC in a similar sample of Mexican students. The higher internal LOC reported by non-working students contrasts with the significance of internal LOC for certain positions requiring internal control of workers, as shown by Meléndez and Toro (2005). This finding is also consistent with the work of Laborín et al. (2008), who demonstrated that internal LOC increases with the complexity of the job. Similar results were found in studies by Reeh, Hiebert & Cairns (1998); Chubb, Fertman & Ross (1997); Vera et al. (2003), as cited by Laborín et al. (2008). This research indicates that there are no differences in internal LOC as semesters progress, contrary to the findings of Dakduk, González and Montilla (2008), who discovered that higher levels of university education are associated with

increased internal LOC, which is also a predictor of academic success (Mayora-Pernía and Fernández, 2015).

Comparisons of marital status concluded that singles have the highest internal LOC, in line with the findings of Padilla and Díaz Loving (2011) that Mexican single youths have a high internal LOC that regulates their sexual behaviors. Regarding age, the research results indicated that the group of younger students (ages 18 to 23) has the highest internal LOC, contrasting with Laborín et al. (2008), who suggested that younger individuals have lower internal LOC. Other studies also support the notion that younger people have lower internal LOC, such as Chubb, Fertman & Ross (1997); Reeh, Hiebert, and Cairns (1998), as cited by Laborín et al. (2008).

According to Ureta et al. (2022): When external LOC was analyzed, it was found to be slightly higher in comparison to internal LOC, with an average of 21.87, approaching the 28 maximum points on the scale. The sample of responding USAC central students shows a greater tendency toward external LOC (Ureta et al., 2022, p. 55).

When analyzing external LOC in relation to the semesters being pursued, evidence was found that a higher semester corresponds to a lower external LOC. These results align with Laborín et al. (2008), who reported that higher education and university studies are associated with an increase in internal LOC. Comparisons of external LOC by marital status indicated that married and cohabiting individuals have a higher average than singles, in line with the findings of Padilla and Loving-Díaz (2011), who reported that Mexican youths in stable relationships have higher external LOC.

Regarding age, the results of this research indicate that as age increases, external LOC also increases, in contrast to Laborín

et al. (2008), who suggested that older age is associated with lower external LOC. However, these findings are consistent with those reported by Vera et al. (2009), who noted that older adults exhibit higher external LOC than younger individuals.

The results of the aggression scale indicated that those who work have the same levels of aggression as those who do not. When comparing these results, they do not coincide with various studies that highlight the aggression and aggressiveness of workers and their work environments. Health workers with professional burnout increase aggression towards themselves and their colleagues and others have a medium level of aggressiveness (Miret and Martinez, 2010; Diaz and Radler, 2013).

Workplace stress is correlated with aggressiveness and influences workplace accident rates (Tacza, 2021; Odar, 2021; Huincho, 2018). The comparisons of semester levels and age groups of participating students, which were associated in this study, indicate that as students progress through semesters and age increases, aggression decreases. These findings align with reports by other researchers, who observed more aggressive behaviors, certain forms of violence, and harassment among university peers, especially among those aged 18 to 25 in the early university years. These behaviors include physical violence towards dating partners (Castillo, 2013; Torres, 2010; Romero and Plata, 2015; Amemiya et al., 2019; Redondo, Inglés, and García, 2017).

The results of the comparisons of averages for married, cohabiting, and single individuals indicated that cohabiting individuals exhibit the highest level of aggression. These findings align with the physical violence displayed by students towards their dating partners, which increases due to lack of communication, aggressive traits, and intransigence, as well as observing violence

among their parents, sexual and verbal-emotional aggression towards their partners in university environments, and adults in relationships with aggressive tendencies towards their partners (Redondo, Inglés, and García, 2017; Rojas-Solís, 2013; Rey-Anaconda, 2017; Rojas-Solís and Carpintero, 2011; Cuenca and Graña, 2016). The moderate level of aggression found in the university students in the sample does not appear to be a psychopathological symptom of clinical interest but may be part of the modal or basic personality of Guatemalans. This concept is based on the adaptation of individuals' basic personality to the culture and society in which they live, integrating within a specific culture and founded on common experiences shared by the people of a society, mediated by the personal characteristics produced by such experiences (Bogaert, 2016; Cueva, 2016).

As final reflections, it can be noted that the results either align with or contrast with those reported by other authors. Specifically, the findings that do not coincide with other research include low internal locus of control (LOC) among university students, low internal LOC among working students, equivalent internal LOC between students in the early semesters and those in advanced studies, younger students with higher internal LOC, lower external LOC among older students, and an equal level of aggression among non-working students. Possible explanations for these disparities could be attributed, first and foremost, to a sampling error, including students from other academic units, which could alter these results. Regarding the low average of internal LOC among students, it might be because in other countries, university studies genuinely foster critical and scientific thinking, which does not align with an external LOC prioritizing personal decisions as responsible for the outcomes in their lives. Concerning the low level of aggression among working students,

it could be due to the students in question occupying positions that do not require a great deal of initiative or leadership in carrying out their job responsibilities or their supervisors not allowing them to take such initiatives. Finally, concerning older students with lower external LOC than younger ones, a possible explanation is that life experiences have allowed them to solidify a greater awareness of the impact of their own decisions on their lives, something that younger individuals may not be in a position to perceive and appreciate. Given these concurrences and disparities, it is evident that more research is needed to further investigate and better understand the behavior of these variables. The current situation of the COVID-19 pandemic and virtual education, coupled with the evidence from this research, highlights the need to provide psychological support and guidance to USAC students.

It is suggested that the Welfare and Student Support Offices of the Academic Units that responded to this research and other USAC research initiatives should establish, implement, and evaluate programs for psychological support and guidance for their students. "These programs could be executed with the assistance of a professional psychologist, accompanied by psychology students performing supervised professional exercises (EPS)," (Ureta et al., 2022, p. 59) with the intention that the budgets are accessible for the Academic Units to cover and to promote the participation of Student Associations in these processes for greater impact and outreach among USAC students. It should be considered that these programs need not be of clinical treatment but should continue to be investigated further with focus groups and other qualitative techniques, exploring more potential clinical triggers of the aggression found in the study sample.

Finally, due to the trend towards external LOC, programs should promote in students

the responsibility that they themselves control their lives, assuming the positive or negative consequences of their actions. Their own successes and failures are, for the most part, the result of their effort and actions.

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### Authors' Contributions

Coordination, drafting, and review of the document: FU

Design of data collection or fieldwork: all authors

Data collection or contribution and fieldwork: MR, ES

Data cleaning, systematization, analysis, or data visualization: FU

Participation in data analysis, structure, and document writing: all authors.

### Supplementary Materials

There are no supplementary materials.

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### About the Authors

**Francisco José Ureta Morales** holds a Bachelor's degree in Psychology from USAC, a Master's in Educational Measurement, Evaluation, and Research from UVG, and is currently a Ph.D. student in Forensic Psychology at the Universidad Internacional Iberoamericana in Mexico. He is a professor in both undergraduate and postgraduate programs at the School of Psychological Sciences and the Faculty of Humanities and a researcher at DIGI - USAC.

**Mavis Rodríguez** has completed her master's degree in research at USAC and holds a Bachelor's degree in Psychology from USAC. She is an existential phenomenological therapist with training from Circulo Existencial in Mexico and ALPE in Argentina. She works as a university lecturer at the School of Psychological Sciences at USAC, reviews theses, and has participated in two research projects funded by DIGI, with another one in progress.

**Elena María Soto Solares** graduated with a Bachelor's degree in Psychology from the University of San Carlos of Guatemala. She holds a Master's degree in Clinical Psychology and Mental Health from the Universidad Mariano Gálvez. Elena works as a thesis reviewer and lecturer at the Center for Research in Psychology (CIEPs), School of Psychological Sciences, University of San Carlos of Guatemala.

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### Conflict of Interest Statement

I declare that I have no conflicts of interest that may have influenced the obtained results or the proposed interpretations.

### Informed Consent Statement

The study was conducted in accordance with the Code of Ethics and Good Editorial Practices for Publication.

## Derecho de uso

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## Use of psychoactive substances in samples of the Guatemalan school population


### Consumo de sustancias psicoactivas en muestras de la población escolar guatemalteca

Kathya Michelle Ramírez Maddaleno   
Universidad de San Carlos de Guatemala  
kramirez@psicousac.edu.gt

Karla María Fortuny   
Universidad de San Carlos de Guatemala  
dra.fortunyg@gmail.com

Francisco José Ureta Morales   
Universidad de San Carlos de Guatemala  
fureta@psicousac.edu.gt

Alma Karina Barrientos Hernandez   
Universidad de San Carlos de Guatemala  
almabarrientos@hotmail.com

Marisa Fabiola Sagastume Donis   
Universidad de San Carlos de Guatemala  
marisasagastume@hotmail.com

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#### Abstract

An investigation consisting of 4 master's degree projects, with a descriptive mixed methodology, this deals with the different risk factors that cause Guatemalan students to fall into problems of use, consumption and abuse of substances. The research evaluated members of the educational community, from the different levels of the educational system, primary, basic, diversified and higher education, addressing parents, teachers, and students according to the evaluated level of public and private institutions. The risk perception of teachers and parents or even the subject himself was explored; likewise, were made some correlations between risk factors as predictors of consumption. Work was done in relation to the vulnerability of the school population in the use and consumption of substances by children and adolescents. Evidence of some vulnerabilities in the students was found, such as low academic performance and problems in interpersonal relationships, as well as aggressiveness, place of residence and low self-esteem. As prevention in the face of these elements, the systematic generation of preventive programs is suggested, based on evidence and that are adequately monitored to have evidence of their results, so that the educational system becomes an opportune scenario to carry out universal prevention regardless of the educational level.

#### Keywords

Preventive strategies, protective and risk factors, self-esteem, aggression, low academic performance

#### Resumen

Se realizó una investigación conformada por 4 trabajos de graduación de maestría, con metodología mixta descriptiva, las cuales versan sobre los diferentes factores de riesgo que provocan en los estudiantes de Guatemala, que llegan a caer en problemas de uso, consumo y abuso de sustancias. La investigación evaluó a miembros de la comunidad educativa, de los distintos niveles del sistema educativo (de primaria, básicos, diversificado y educación superior), abordando a padres de familia, maestros, y alumnos, según el nivel evaluado de instituciones públicas y privadas. Se exploró la percepción de riesgo que poseen los maestros y padres de familia o incluso el propio sujeto; así mismo se trataron de realizar algunas correlaciones entre factores de riesgo como predictores de consumo. Se trabajó en relación con la vulnerabilidad de la población escolar en el uso y consumo de sustancias de niños y adolescentes. Se encontró evidencia de algunas vulnerabilidades en los estudiantes como bajo rendimiento académico y problemas en las relaciones interpersonales, así como la agresividad, lugar de residencia y baja autoestima. Como prevención ante estos elementos se sugiere la generación sistemática de programas preventivos, basados en evidencia y que sean adecuadamente monitorizados para tener evidencia de sus resultados, de manera que el sistema educativo se convierte en un escenario oportuno para realizar prevención universal independientemente del nivel educativo.

#### Palabras clave

Estrategias Preventivas, Factores Protectores y de Riesgo, Autoestima, Agresividad, Bajo Rendimiento

## Introduction

The consumption of psychoactive substances in Guatemala is carried out from an early age. According to the National survey on drug use, abuse and prevalence, at the middle level of education carried out in 2014, there is prevalence of first consumption at 5 years old in 0.62%, reaching the highest frequency for alcohol at 14 years old with a percentage of 18.24% and for tobacco with 18.42% (Universidad Galileo, 2014). The most effective preventive actions have been to delay the age of onset of consumption. In order to develop effective strategies to support the delay of consumption, it is important to understand the context and to adapt or design prevention programs aimed to respond the needs of the context.

This article has considered different questions, which seek to understand those elements that should be considered in the design of prevention strategies. The perception of parents and teachers on the vulnerability of children, since they are considered to be the agents that should work on communication and two-step prevention strategies. Since they become role models for the school-aged child. Identifying the risk perception of parents and teachers can be the starting point to diminish the myths and realities of each of the groups.

Two dependent variables were studied: self-esteem and aggressiveness, which are elements of social skills, in order to identify their relationship with substance use and whether they should be considered among the objectives to be considered in the application of a preventive program.

Finally, the effectiveness of prevention programs in the 13 to 18 year-old age group at the high school level and the perception that university students have of the prevention programs applied in higher education were evaluated.

It has been identified that there is poor perception of the programs and a great need for their application.

Although users state that they consider that informative talks can be effective in preventing substance use, as professionals in the area, we consider that the results of the investigation present the challenge of identifying how the educational curricula include the topic in the conceptual, procedural and attitudinal contents from pre-primary to higher education, strengthening them and designing a preventive line during all school levels, which develops different skills that have an impact on the age of delaying substance use.

## Materials and methods

Starting from the area of Mental Health, work was performed from the prevention space to build and deconstruct individual and group meanings and the implementation of healthy behaviors (Martínez Ortiz, 2006). Likewise, risk perception was developed to reduce substance abuse conditions and decrease risk factors, promoting the increase of protective factors.

In this investigation, risk factors are identified in the population that could develop or not develop addictive pathology in elementary school from 7-12 years old, middle school and high school that is characterised by adolescence from 13-18 and from 18-21 years of age, represented for young adults who are in university. In this age group, it has been identified that part of the population is vulnerable to the situation mentioned above, together with the fact that the preventive programs in place at the Executive Secretariat of the Commission Against Addictions and Illicit Drug Trafficking (SECCATID), have several gaps in coverage, leaving out many groups of students from its attention.

The investigation had a timeline from July 2018 to March 2019, in which it sought to identify the role of school as a protective or risk factor for substance use. The first graduation work divided the problem into two or more risk factors in the sample of children between 6-12 years old, which is when they are in elementary school. In which the aim was to find out what the perception of risk was in order to reduce the conditions that allow maintaining the mentioned problem, to confront the presence of risk factors, as well as to promote the presence of protective factors.

The second study focused on the problems of school children and teenagers with aggressive behaviors, considering self-esteem as a protective factor against substance use and abuse. This protective factor is determinant for impulse control and emotion regulation at these ages. Especially in the school environment, where Becoña (2002) states that school age is the stage of greatest risk of substance use, so it is recommended to implement prevention programs at this age.

A third investigation corresponds to the approach of prevention in the school population of middle and high school, which is influenced by adolescence between the ages of 13-18 years old. In relation to the use or abuse of psychoactive substances for students at this stage, and as a result of the problem that is being experienced in the country, it is important to work on a Prevention Plan for young people between 13 and 18 years of age who are in study centers, where there may be a risk of experimental consumption. For this reason, it is necessary to have the basic tools to be able to elaborate preventive actions.

As a fourth and last investigation, alcohol consumption in university students in Guatemala was addressed, in ages 18-21 years, where young adult students are called,

where the problem is presented, to which the young university students are confronted, due to the fact that the consumption of alcohol is a problem for the young adults. young university students face, due to alcohol consumption consumption of alcohol within the facilities of the of the Universidad de San Carlos de Guatemala.

It was identified the need to promote and encourage prevention programs that guide students in the proper use of free time and leisure; creating self-awareness of the health benefits of practicing constant physical activity.

### **Geographical location and timeframe of the investigation/Getting information.**

The School of Psychological Sciences (ECPs) is the institution that manages the Master's Degree in Prevention and Comprehensive Care of Addictive Behaviors, two of the investigations in this article, the first and the fourth, were executed within that institution and the other two investigations outside the ECPs in order to have a generalized view of the context and a complete description of the phenomenon of substance use, consumption and abuse in school environments.

In the first, parents and teachers of elementary school children attending a school practice center were evaluated. This center offers psycho-pedagogical support to students who show difficulties in the school area and poor school performance, as well as to their parents. It also offers a psycho-pedagogical counseling program for teachers that provides strategies to support these students in the classroom. In order to have access to this population, a survey was carried out with parents with voluntary participation and a focus group with teachers, with convenience sampling, to identify the perception that both groups have about the vulnerability of school-age children.

The second and third were executed in educational institutions of the national system. The second one in: Escuela Oficial Urbana Mixta No. 55 "Sara Cerna Zepeda" and Escuela Oficial Urbana Mixta No. 53 "David Vela". Located in zone 7 of Guatemala City, the purpose of the study was to identify the relationship between the level of self-esteem and aggressive behaviors in school children and teenagers in fifth and sixth of elementary school. The third investigation was carried out at the secondary school level at the "Brooklyn" Bilingual Mixed School located in San Cristóbal, Zone 8 of Mixco, and the "INEB" Carolingia Institute, located in the Carolingia neighborhood, Zone 6 of Mixco, with the objective of identifying healthy school and family environments free of the consumption of psychoactive substances in young people aged 13-18 years old.

In the fourth investigation, the possibility of using the population of the School of Psychology was taken up again and the evaluation was made of first year students of the Bachelor's Degree in Sports and first year students of the Initial Teacher Training Program, which are carried out in the School of Science and Technology of Physical Activity and Sports ECTAFIDE; located in the M3 building of the university city, zone 12. With the purpose of exploring alcohol consumption and associated psychosocial problems in university students. This was divided in two moments, in the first one a questionnaire of 23 questions was used to describe the consumption patterns, later focus groups were applied with both populations in order to obtain information that enriched the answers collected by the questionnaire, obtaining feelings and opinions of the participants.

### Information Collection

The first investigation used voluntary and convenience samples in the parent survey. 17 parents participated and in the focus groups,

groups in which 24 teachers participated were taken into account. Both groups are of heterogeneous origin, since they come from different educational institutions, mostly from the public sector. The second investigation took into account 112 schooled children and teenagers of both genders, who study in official urban schools in Guatemala City, in fifth and sixth grade. Five teachers participated in the study, from official mixed urban schools in Guatemala City.

The third investigation carried out a questionnaire of 20 items to 35 elementary school students at the private school and 28 elementary school students at the public high school, and a 20-question interview was conducted with 10 teachers from each school. Finally, in ECTAFIDE, teenagers and adults between 15-25 years of age who attend university and are studying careers related to sport and physical education participated, 62 from ECTAFIDE and 25 from Initial Teacher Training (FID), there is no information on gender specificity.

### Techniques and instruments

The first and fourth investigations had a mixed investigation model and applied closed questionnaires and focus groups, which were designed by the researchers based on a category tree. The second investigation had more quantitative characteristics for the purpose of correlating two variables, for which the Rosenberg Global Self-Esteem Scale (Góngora and Casullo, 2009; Smith-Castro, 2014) and a six-item Likert scale, carried out by the researcher, were used to measure aggressive behaviors. The third investigation applied a questionnaire with a cross-sectional descriptive approach of 20 questions to students and an interview of 20 questions to teachers, which were designed from a tree of categories of risk and protective factors.



### Processing and analysis of information

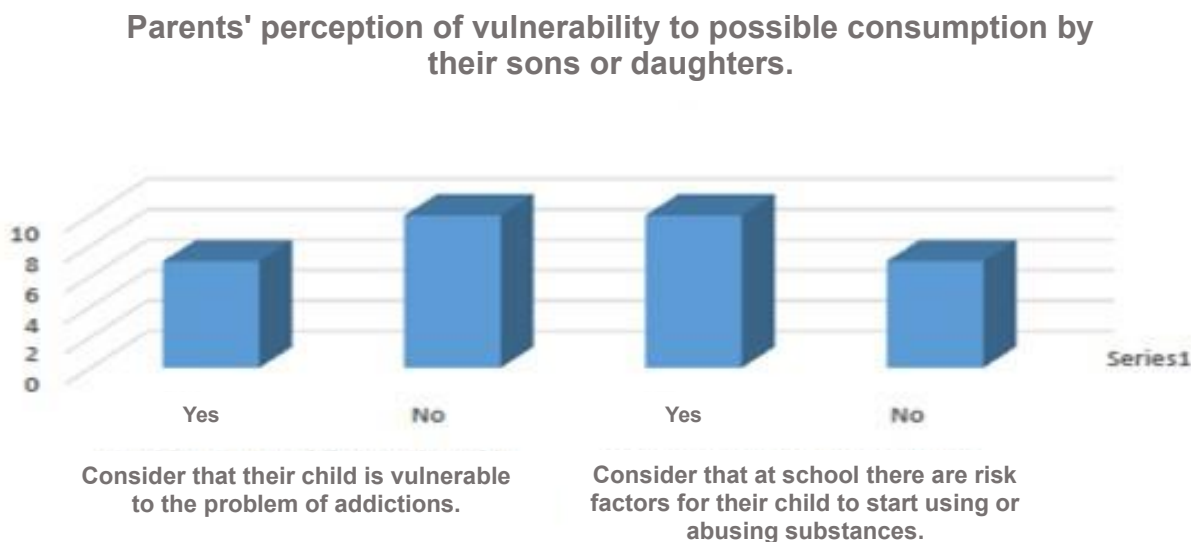
A matrix analysis was carried out in the investigation, for the qualitative parts and to identify the predominant ideas in the discourse. Descriptive statistics and correlation of variables were calculated for all quantitative data. Bar graphs, pie charts and scatter diagrams were also made, which allowed a graphical representation of the information. For the application of each of the tests (Rosenberg Global Self-Esteem Scale, surveys) and techniques (focus groups) an informed consent form was requested to be signed by each of the participants.

### Results

In the first investigation, focus groups were carried out which included four areas: first, indicators of substance use and consumption, where it was identified that,

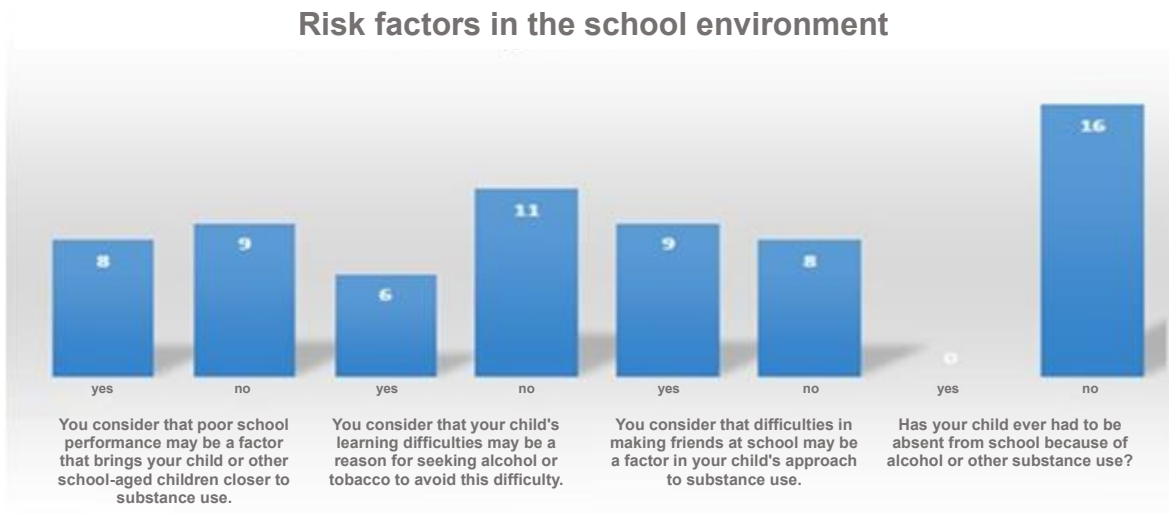
although in elementary schools teachers identify some of these cases in fifth and sixth grade, they cannot be classified as addictive problems. A closed questionnaire was applied to parents to find out the patterns of substance use in the nuclear family of children experiencing problems associated with poor school performance or difficulties in learning processes, as well as to identify whether parents find risk factors associated with substance use. In reference to the study carried out by Ramirez (2019) it was identified, in relation to the sample that 58% of parents do not identify risks of substance use in their children. However, 41.17% of the sample perceive or sense some type of risk. When asked if parents consider the school as a risk factor, 58% identify or recognize that social relationships within the school environment are a possible risk to motivate substance use.

Figure 1. Parents' perception of vulnerability to possible consumption by their sons or daughters



Source: Ramírez,2019.

Figure 2. Risk factors in the school environment.



Source: Ramírez,2019.

Graph 2 shows the following aspects: substance use has not led to school absenteeism, poor school performance is not perceived as a risk factor by parents, greater vulnerability is attributed to the difficulty in establishing social relationships, since friends are associated with possible responsibility for children's substance use.

In the second investigation, self-esteem and aggressive behaviors were observed in fifth and sixth grade of elementary school students; aggressive behaviors were identified by the teacher in charge of the grade. Instruments adapted to be applied to the school-age population were used. For self-esteem, the Rosenberg Global Self-Esteem Scale was adapted, contextualizing

some terms to the school environment. To evaluate verbal and physical aggressive behavior, a Likert scale of 6 items was carried out and applied to teachers.

This investigation was descriptive correlational quantitative and used a non-probabilistic purposive sample. The sample included a total of 112 schoolchildren in fifth and sixth year of elementary school, of which 58% were identified with aggressive behavior, to whom the self-esteem instrument was applied (Fortuny, 2019). The following table and graph show the information identified, as well as Pearson's correlation test relating the two study variables self-esteem and aggressive behavior.

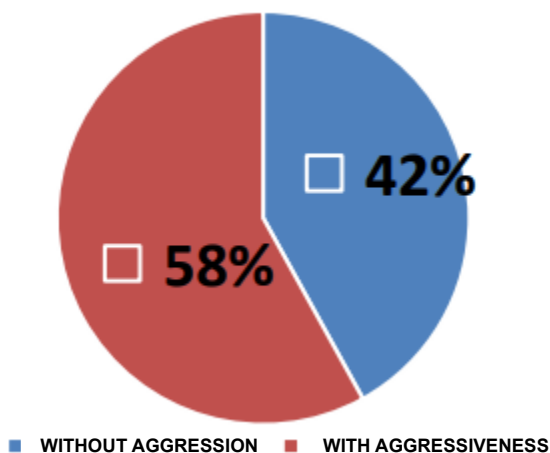
Table 1. Students identified with aggressive behavior.

Identified behavior	Number of schoolchildren	Percentage
With Aggressive behavior	65	58%
Without Aggressive behavior	47	42%
<b>Total</b>	<b>112</b>	<b>100%</b>

Source: Fortuny,2019.

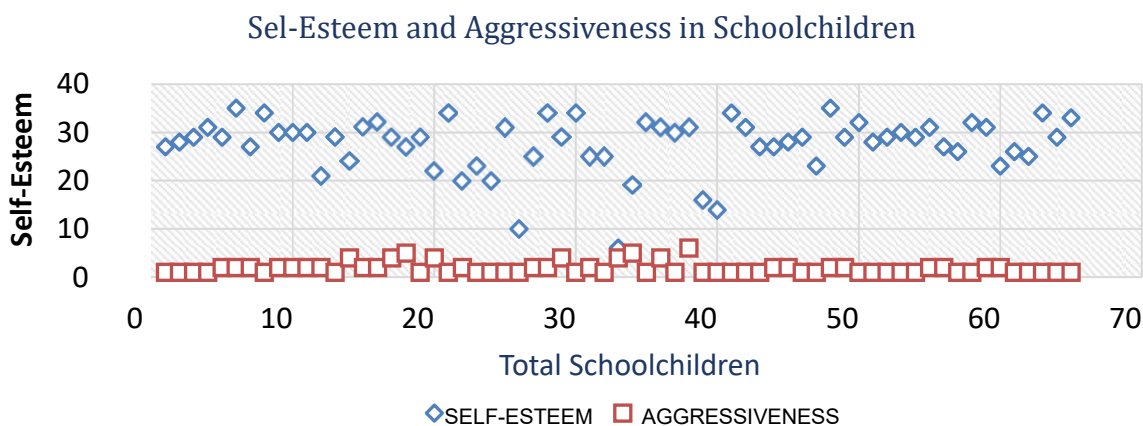
Table 3. Distribution of the total number of fifth and sixth year elementary school students who were identified as having aggressive behavior by the teacher in charge of the grade.

TOTAL 112 SCHOOLCHILDREN



Source: Fortuny, 2019

Figure 4. Dispersion of Self-Esteem and Aggressive Behavior



Source: Fortuny, 2019

In the third investigation, a population of 35 students from the private educational center and 28 from the public educational center, of both genders, where the young people reported that they had suffered behavioral changes in the last year, affecting inter-family relations 86% of the population of the private establishment. Likewise, 86% of the teenager also said that they have self-control in vulnerable situations of consumption.

They reported that they invest their money in things that are healthy (69%).

49% of the population reported having had access to some type of licit or illicit psychoactive substance. Adequate parental supervision was reported by only 37% of the population. 94% consider that drugs can ruin their lives. And 89% consider that drugs are harmful to their body and mind.

The information is not so different in the public educational center, since young people report that their parents supervise their activities. Likewise, 69% of them consider that they invest their money in healthy things and 57% consider that they have self-control. It is very similar with the interview conducted with young people from the private establishment, they also consider that drugs are harmful to their physical and emotional health, and that they can ruin their life, this in 77% (Sagastume, 2019).

In the fourth phase of the investigation, a total population of 87 students was taken, distributed as follows: ECTAFIDE: 62 students of both genders and in the FID Program: 25 students of both genders.

The characteristics of alcohol consumption in ECTAFIDE and FID program students were examined. The responses indicate that 82.80% do not consume alcohol on a regular basis. 96.60% indicate that they do not have an established plan for alcohol consumption. 77.60% do not perceive alcohol consumption as a way to be accepted within the peer group in social, sporting or cultural events. When asked about staying without alcohol consumption for a long time, more than 82% responded that they manage to remain abstinent from alcoholic beverages.

The analysis of the characteristics of frequency of alcohol use and consumption of university students indicates that 78.6% can go without alcohol consumption for some time, 42.20% indicate that they feel comfortable at sporting events even if there is no alcohol, likewise 49.40% are not disturbed by the presence of alcohol at meetings. This indicates that students do not need alcohol to attend any type of event.

Regarding the frequency with which they consume alcohol, out of the 87 only 19 responded, of which (68.4%) indicated that they preferably consume alcohol on

Saturdays (Barrientos, 2019). This information contradicts what was found by (Martínez-Cardona, et al., 2019) in relation to the beliefs of young people about alcohol, where about 50% of the participants consider that alcohol allows them to have fun and relax, a lower percentage affirms that it allows them to be cheerful.

Regarding the perception of preventive activities for substance use, USAC, as the governing body of higher education, should be concerned that its students develop integrally by practicing physical exercise and healthy behaviors. Some questions were included about the perception that students have of the preventive activities of substance use within the university. They were asked if they identified preventive actions of alcohol consumption carried out by the university, 89.5% responded that there are none. As a result, they were asked if they would participate in preventive activities, 52.46% indicated that they would participate in sporting events with a preventive focus. When asked in which preventive activity they would like to participate, 36.6% indicated that they would feel comfortable participating in conferences or talks.

They were also asked if they participated in any preventive action during their life as students at the elementary, high school and university level, 83.7% indicated that they have not had any such activities in their school life. Consequently, it is evident that there is a need to formulate systematic and permanent preventive programs within the university, so that students do not reach high levels of consumption or become a person with a substance use disorder. For this reason, the university should ensure the promotion of permanent programs of physical activities to improve the quality of life, academic performance and above all to prevent diseases and consumption of any type of substances.

## Discussion

In the first investigation, at the conclusion of the analysis of the focus groups it was concluded that teachers Ramirez (2019) teachers perceive that poor parental supervision or parental neglect or lack of parental competence, as well as the socioeconomic factor that do not cover basic needs, the geographical location of schools in red areas make vulnerable school-age students prone to substance abuse motivated by the above factors.

This result coincides with Dento and Kampfe in 1994, cited by Peñafiel (2009), who state that the family is relevant because it is the first social environment in which people, and specifically children, develop. The reactions or behaviors presented by the family can trigger motivation, neutralize or avoid the motivation to consume substances.

Teachers are interested in their students' drug use, but they also indicated the relevance of family or parental drug use during their students' childhood, which they said can impact academic performance and the ability to have friends. This is because they may be rejected or stigmatized and could be bullied at school because of the evidenced consumption of a close relative. In relation to this idea, Beardslee, Son and Vaillant in 1986, cited by Natera, et al, (2001, p.18) identified that 26% of people with alcoholic parents can inherit this consumption pattern. While people who are not exposed to parental alcoholism only 9% develop this problem, percentages associated with the study sample of these researchers.

In contrast, the parents surveyed do not perceive poor academic performance as a risk factor, much less as the most important one; they perceive their children's difficulty in establishing friendships and interpersonal relationships as more important. This contrasts with what is indicated by the PACARDO study, where Ribera and Villar in 2005 quoted by Ramirez (2019) state that:

School problems are outlined as a risk factor for drug use in the school population. Reconfirmed by the findings of the study of risk factors for alcohol consumption in schoolchildren aged 10 to 18 years, from public schools in the city of La Paz, Bolivia, in 2003 and 2004 (p. 68).

This first investigation was descriptive and observational, intended to contrast the frequencies of risk factors of non-user students with substance user students. Some assessment areas of the Drug Use Screening Inventory (DUSI), developed by Johns Hopkins University, Baltimore MD (Universidad Galileo de Guatemala, 2014) were applied with a different intention with which it was created.

The results of the DUSI school area indicated that 92% of the consumer group studied and 8% dropped out of school. The group of student consumers reflected 65% who have repeated one or more grades, contrasting with only 29% of the control group. Parents' perception of their children's difficulties in establishing interpersonal relationships may even increase their children's vulnerability, due to the findings of the Research Institute on Drug Dependence, which states that that academic performance is affected by substance use and substance use and the time of return home during home during leisure hours (Navalón and Ruiz-Callado, 2017), the misperception that the lack of interpersonal relationships impacts substance use may be a reason for the lack of substance use may be a reason for the lack of setting limits in relation to the time of return home.

The second investigation showed the importance of the teacher's role in identifying risk factors, especially aggressive behavior and alterations in self-esteem. In recent decades, there has been an increase in the investigation related to aggressive behavior and violence in the school context since a decrease in the age or initial stage of such

behavior has been evidenced (Albaladejo-Blázquez, 2013, as cited in Fortuny, 2019).

When reviewing the results on the gender of schoolchildren identified with aggressive behaviors, 75.38% were boys and 24.62% were girls, a result that coincides with investigations that related aggressiveness in children to delinquency and substance abuse. This relationship is stable and remains over time for girls and boys, with the majority of delinquent behaviors in boys and those of substance use in girls of higher socioeconomic level (Brook, 1995).

On the other hand, while (León-Gualda & Betina Lacunza, 2020) that it is women who adopt more egalitarian gender positions who tend to consume tobacco and alcohol, and that it is even due to the social role assigned the female tendency to substance use. This study also identifies that children in poverty tend to be exposed to greater risk factors due to limited access to basic services and low living conditions.

The evaluation of students' aggressive behaviors in the classroom indicated the predominance of verbal violence over physical violence, with insults, heated arguments, disrespect among peers and towards teachers, and bad manners. These behaviors are located in levels 1 and 2.

Martinez (2006) indicated that inappropriate expressions of anger increase the likelihood of inappropriate peer relationships and the possibility of deviant behaviors. He indicated that substance use is regularly preceded by anxiety, aggression, and behavioral disorders, so that youth identified by their teachers as aggressive are more prone to drug use than non-aggressive youth. The results showed a relationship between self-esteem and aggressive behavior, which is a predictive factor for drug use and abuse; the higher the aggressive behavior, the lower the self-esteem. "This evidenced the need to develop programs to strengthen protective factors, mainly self-esteem in children and

teenagers in school environments in Guatemala City" (Fortuny, 2019).

In the third investigation, in relation to the results, it is defined that it is of utmost importance that schools implement a preventive program for the consumption of psychoactive substances, so that if there is an experimental consumption, the possibilities of remaining in consumption are reduced. Communication between parents and teachers is of utmost importance, since students spend a good part of the day with their teachers and they could help detect any anomaly in their behavior, as well as carry out a prevention plan including risk and protection factors.

Constant communication between parents and schools is recommended. Psychological help should be available in the schools and talks should be and carry out talks with a psychological approach to prevent the consumption of psychoactive substances. It is also of utmost importance to provide tools to occupy leisure time, free time and recreational life.

The fourth and last study, investigated alcohol consumption among USAC students, 68.4% indicated that they consume it on the weekend, which increased by almost a third when compared to the 39.83% reported by the National School Age Survey (Universidad Galileo de Guatemala, 2014). This result coincides with that indicated by the emergency of the Social Security Institute [IGSS] (2011), the attention and investment in outpatient care on addictions evidenced that alcohol consumption is 60%. This also indicates an increase when compared to other studies in similar contexts by Garcia-Estrada, Mzann, Stike, Brands and Khenti (2012), another investigation in an indigenous community in Nicaragua (Pan American Health Organization, [PAHO] 2009) and the results of dual pathology in Jutiapa (Ramos et al., 2015).

This evidence drives the concept that consumption increases along with age, even so the evidence provided by Becoña (2007) indicates that alcohol consumption increases during adolescence but after the age of 20 it decreases. Mainly due to assuming adult roles such as motherhood and fatherhood, marriage and work, "...which draws attention and leaves the curiosity to evaluate the same cohort upon leaving college to determine whether consumption levels have decreased." (Barrientos, 2019, p. 70).

## Conclusions

- Both parents and teachers identify different vulnerabilities in students, some associated with academic performance and others with interpersonal relationships. However, the joint participation of parents and teachers in the search for protective activities for the school-age population is necessary.
  - Addictions are a multifactorial phenomenon, where self-esteem, aggressiveness, demographic factors such as gender and residence can increase the vulnerability of students.
  - Although the consumption of substances in educational institutions is regulated, it is necessary to have systematic intervention of evidence-based preventive programs that are adequately monitored to have evidence of preventive programs. At present, there is no information available at the national level to know the effectiveness of the programs applied.
  - University students say they identify few preventive actions to reduce substance use within the institution. They express willingness to participate in sports activities or talks to prevent consumption; however, it is considered that the application of preventive programs should be evidence-based.
- The educational system, regardless of the level of education, covers a large part of the population and with adequate knowledge of the context, evidence-based strategies can be applied at different levels that respond to the needs and have an impact on a large part of the population, making it an opportune place to apply universal prevention programs and make brief interventions in cases that merit it. These conclusions are relative to the samples used in the 4 graduation works synthesized in this article.

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## About the Authors

**Kathya Michelle Ramírez Maddaleno** has a Bachelor's Degree in Psychology USAC, Master's Degree in Prevention and Integral Attention of Addictive Behavior USAC, Master's Degree in Higher Education with specialization in Information and Communication Technology UNINI, Professor of undergraduate and graduate studies at USAC.

**Alma Karina Barrientos Hernandez** is Professor at the School of Science and Technology of Physical Activity and Sport - ECTAFIDE-, Coordinator of the Initial Teacher Training Programs in Physical Education -FID-EF- and Training Program Academic Program for Professional Development of Teachers in Service of the official sector of the Ministry of Education. - PADEP/DEF-.

**Karla Maria Fortuny** is a Dental Professional with more than 26 years of experience in teaching, outreach and university investigation, with emphasis on the discipline of Periodontics, academically training students prior to obtaining the title of dental surgeon, achieving theoretical and clinical skills with critical analysis for the practice of the profession in the labor market. He has studies of Specialization in Educational Innovation, and Specialization in Didactics of Higher Education, complements his teaching with a Master's Degree in Prevention and Comprehensive Care of Addictive Behavior and studies in Master in University Teaching.

**Marisa Fabiola Sagastume Donis** has a Bachelor's Degree in Psychology USAC, Master's Degree in Prevention and Integral Care of Addictive Behavior USAC, Clinical Psychologist at Hospital de Salud Mental "Federico Mora".

**Francisco José Ureta Morales** has a Bachelor's Degree in Psychology USAC, Master's Degree in Measurement, Evaluation and Educational Research UVG, PhD student in Forensic Psychology Universidad Internacional Iberoamericana - Mexico, Undergraduate and graduate professor at the School of Psychological Sciences and Faculty of Humanities, Researcher at DIGI - USAC.

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### Derecho de uso

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## Maternal attachment in childhood and the development of codependency in adulthood in women from 18 to 60 years of age in Guatemala City

### *Apego materno en la infancia y el desarrollo de codependencia en la vida adulta en mujeres de 18 a 60 años de la Ciudad de Guatemala*

Stefany Dulce Amely Villatoro Gaitán   
Universidad de San Carlos de Guatemala  
dulceviga@gmail.com

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#### Abstract

The main purpose of this research is to determine the correlation between the variable Attachment and Codependence. Method: a quantitative correlational study, which measures the proportion of relationship between the variables evaluated in this study; using two specific tests, elaborated in a Mexican context with similarities in the Guatemalan sociocultural context. The tests were the VINCULATEST and the I-COD. The present study took into account a selective and intentional sample, selected and chosen with a direct and referential call. As for the time of application of the study, it was equivalent to a period no longer than 60 days. The characteristics of the sample for the referred study included a selective group of 33 women of legal age, who had been in a couple relationship for more than two years, who were also part of a self-help group or were part of the population of a professional center for psychological care. Results: 67% (22 people) of the sample obtained results that indicate that the codependence developed is considered as “positive”, that is, it is a form of bonding culturally typical of women who identify and are interested in an affective connection, which does not commit them to their romantic partner being the central role in their life. And 33% of the population (11 people), suggest that it is important for participants to seek or be oriented to a future intervention treatment. Conclusion: the research yielded results that suggest that the correlation index was positive, resulting in a medium-high level for the two variables studied.

#### Keywords

codependency, family, dysfunctional family, attachment, bonding, love addiction

#### Resumen

El principal propósito de la presente investigación, es determinar la correlación existente entre la variable Apego y Codependencia. Método: estudio de tipo cuantitativo correlacional, que mide la proporción de relación entre las variables sometidas a evaluación en dicho estudio; empleando dos pruebas específicas, elaboradas en contexto mexicano con similitudes en el contexto sociocultural guatemalteco. Las pruebas fueron VINCULATEST y el I-COD. El presente estudio tomó en cuenta muestra de tipo selectiva e intencional, seleccionada y escogida con una convocatoria directa y referencial. En cuanto al tiempo de aplicación del estudio fue equivalente a un periodo no mayor a 60 días. La característica de la muestra para el referido estudio incluye un grupo selectivo de 33 mujeres mayores de edad, situadas en un tiempo mayor a dos años en una relación pareja, que a su vez formaban parte de un grupo de auto ayuda o bien conforman parte poblacional de un centro profesional de atención psicológica. Resultados: El 67% (22 personas) de la muestra obtuvo resultados que indican que la codependencia desarrollada se considera como “positiva”, es decir es una forma de vinculación culturalmente propia de las mujeres se identifican e interesan por una conexión afectiva, que no las compromete del todo a que su pareja sentimental sea el papel central en su vida. Y el 33% de la población (11 personas), sugiere que es importante que las participantes busquen o sean orientadas a un futuro tratamiento de intervención. Conclusión: la investigación arrojó resultados que sugieren que el índice de correlación fue positiva, dando como resultado un nivel medio-alto para las dos variables estudiadas.

#### Palabras clave

codependencia, familia, familia disfuncional, apego, vínculo, adicción al amor

## Introduction

This investigation presents the information collected from the study "Maternal attachment in childhood and development of codependence in adulthood in women between 18 and 60 years of age in Guatemala City".

The study sought to establish the existing correlation between the variables Attachment and Codependence by means of a quantitative correlational study, with the purpose of measuring the proportion of relationship between the variables evaluated in this study; using two specific tests, elaborated in a Mexican context with similarities in the Guatemalan sociocultural context. The tests were the VINCULATEST and the I-COD.

The present study took into account a selective and intentional sample, selected and chosen by a direct and referential recruitment. As for the time of application of the study, it was equivalent to a period not longer than 60 days. The characteristics of the sample for the referred study included a selective group of 33 women of legal age, who had been in a relationship for more than two years, who were part of a self-help group or were part of the population of a professional center for psychological care. A review of the history related to codependence shows that relationships are complex, and society and culture repeatedly show a distorted idea of what a relationship should be.

Being part of a sentimental relationship implies a dynamic process in which changes are constantly experienced, not only because of living together, but also because of the combination of ideas, desires, projects, thoughts and mainly emotions of both people. This coexistence becomes even more complex when the central dynamic of the

couple is to complement the emotional voids of each member.

As Minuchin et al. (2007) expound, "(...) a certain degree of complementarity is the principle that defines every relationship. In every couple, one person's behavior is connected to that of another. This means that the actions of the couple are not independent, but rather co-determined, subject to reciprocal forces that either support or polarize, and this calls into question the cherished belief in the individual, that island of self, happy, autonomous, the land of free will, which we like to think we are" (p. 157).

In therapeutic work, it is common to encounter paradoxes or dichotomies that combine in the lives of human beings in couples. Often, humans tend to choose a partner in a complementary way, and feelings of attraction are usually motivated by qualities or attributes that are often distinct from one another, as long as a sense of complementarity is generated. When an emotional bond promoted by sentimental or physical attraction occurs, the individual differences between subjects are often complementary, sometimes even valuable, gratifying, and enriching. Despite these emotional characteristics often being positive, they later begin to cause discomfort and tension in the relationship.

When romantic relationships become dysfunctional, people tend to exhibit negative and inflexible behavioral responses toward each other. This becomes a behavioral trigger, conditioned by what is commonly known as "affective negativity," associated with a limited or nonexistent reflective capacity to perceive or understand each other.

Actions such as criticism, devaluation, avoidance of any form of contact, verbal and even physical aggression, manipulation, emotional detachment, among others,

generate negative feelings that lead to behavioral patterns causing dysfunction in the rational interaction process of individuals, such as difficulty in communicating effectively or problem-solving.

This is how negative behavioral interaction scales are created, causing the relationship and the space of reciprocity to become negative and insecure.

This dynamic is often the result of cultural beliefs that relationships are meant to be forever, that one should endure as much as possible, or the false expectation that the loved one will change at some point. This aspect highlights the codependent pathology in the dynamics of a couple's coexistence. This was explored in the Latin American context, primarily in Mexico, Argentina, and Guatemala, where previous research and the development of standardized psychometric tests yielded sustainable research data regarding women involved in a codependent relationship. This perspective is culturally perceived as a personality disorder or as a result of the attachment style developed during childhood, as supported by John Bowlby's Attachment theory.

### **Background and Theoretical Review: Attachment and Codependency**

Mansilla (2002) suggests that codependency is a very ambiguous and broad term, often associated with bonding and the definition of attachment [continuing the argument]. The term known as "attachment" defines the behavioral relationships of individuals when they have formed a specific relationship, usually conditioned by neurophysiological structures or the natural response of the "actively social" individual who typically seeks to relate to others (p. 11).

Mansilla (2002) argues that in the first months of life, humans tend to remain in a state of

vigilance or respond sensorially to endogenous and external tensions in the environment or surroundings to which they are exposed. These responses are controlled by the emotional quality or natural excitation of the senses, allowing humans to encode sensory information that will help them structure and organize their experiences.

Usually, the initial stage of human life marks a fundamental starting point that will significantly determine the ability to perceive, understand, and socially interact in the future. Mansilla (2002) argues that infants typically have the exponential ability to sensually perceive their environment during the breastfeeding stage, using factors such as the rhythm or movement of objects (people or things). They can even perceive their intensity, for example, postures, muscle tone, among others. In addition to physical factors in motion that activate perception, it can be conditioned by sound, smell, sight, taste, touch, or other senses on which they particularly depend to experience, learn, and perceive (p.12). Based on this, Winnicott conceptualized this process as "fusion phase," which occurs in the initial interaction between human beings, particularly between mother and child. This fusion phase is activated when the mother identifies and projects the child's needs and successfully fulfills all the necessary caregiving tasks. With the care provided by the mother, the child is able to have a personal existence, initiating the evolution of what is known as existential continuity. However, if the mother's care is not adequate, the child does not achieve a real existence. Instead, the personality forms around environmental conflicts (Winnicott, 1981).

Multiple authors, including Bowlby (1985), Retana and Sánchez (2008), Kornberg and Rougier (2017), and Johnson (2019), agree that emotional problems associated with codependency stem from unmet childhood needs, hindering the capacity for emotional

Despite various theoretical proposals on these issues, some authors claim that codependency tends to significantly affect women and has strong implications for interpersonal relationships (Noriega and Ramos, 2002; Da Costa et al., 2017).

Bowlby, in his attachment theory, scientifically demonstrated that early human relationships fundamentally shape the ability to respond and engage in social interactions in later life. Thus, in childhood, experiences that usually begin with direct contact with caregivers are consolidated and internalized because premature attachment is encoded based on the level of security the individual or infant perceives in times of need or vulnerability.

For Retana and Sánchez (2008), attachment is also a vital and natural factor in the social development of individuals, especially in the context of romantic relationships. In fact, it is a premise of what is known as "romantic love" or its idealization.

According to Bowlby (1985), attachment is "any form of behavior that results in a person obtaining or retaining the proximity of another individual, usually conceived as stronger and wiser. Attachment figures are individuals who allow the child to gain feelings of self-worth and security" (p.292).

Following Bowlby (as cited in Hernández, 2018), in childhood, attachment naturally seeks a balanced or equidistant point in the process of interaction and learning originating with caregivers and the sense of exploration. If the projected attachment figure is close to the subject in a state of vulnerability and the environment becomes secure, the child will perceive trust and comfort, activating what will be known as "exploratory behavior." However, if the child perceives threats, risks, or unfamiliar coding far from safety and trust,

behavioral responses that lead to seeking protection from the projected attachment figure will be activated. If this proximity is not provided, and an emotional bond is not formed, Bowlby referred to it as maternal deprivation (Kornberg and Rougier, 2017).

According to Hernández (2018), three types of situations can trigger feelings of fear, alertness, or risk. The first relates to the environment or surroundings: in these situations, the infant perceives the vulnerability of the caregiver, sensing anxiety reactions or other conditions to which the caregiver is exposed and that activate this vulnerability, caused by illness or natural sensory conditions like hunger, cold, sadness, among others (p.73). This reveals the wide range of needs that the child requires to be met. Hernández (2018) also notes that in humans, physical separation between mother and child can be perceived or classified as real or imaginary. In the case of real separations, these might include the physical absence of the mother due to death, the child's abandonment, and so on.

Regarding imaginary separations, these can be caused not only by factors related to the mother but also by conscious and voluntary actions, such as when children are unwanted, effects of postpartum depression, or a combination of both involving alienated acts or conscious will, such as the disorganization of both the mother and the father or both in the process of parenting for the proper care of the infant, among others (p.74-75).

According to Barudy and Dantagnan (2005), the attachment formed between the caregiver and the child is of great importance and constitutes a natural condition for both physical and emotional survival in childhood. If this attachment is nonexistent or scarce, the future consequences will be not only permanent but also irreparable.

**Gendered Power of Humans** in their early developmental stage tend to associate attachment with feelings of fear or insecurity, the future impacts on the individual are typically characterized by the development of an unstable personality, the inevitability of receiving insecurity, apprehension, and, in the process of social construction of the emotional trait in a couple, can manifest as jealousy, restless love with a high degree of concern, or even pathologies caused by a need for dependence or addiction fueled by these behavioral traits (Bowlby, 1985; Retana and Sánchez, 2008).

Codependency can be understood as a problem resulting from the effects that may arise from relationships with a dependent character, which can, in the long run, lead individuals involved in the relationship to be psychologically and emotionally affected by frequent states of dissatisfaction or continuous suffering. As argued earlier, women are more prone to find themselves in such situations, often dedicating themselves to attending to their partner's and others' needs, neglecting their own. Noriega and Ramos (2002), Retana and Sánchez (2008), Mellody, et al. (2012), Da Costa et al. (2017), and Madanes (2019) all agree that behaviors associated with low self-esteem and other patterns that make us forget our priorities, putting others first, are associated with mechanisms of denial, identity problems, emotional repressions, or the need to save others or help without first considering one's own needs or consequences.

## Family Dysfunction

According to Barudy and Dantagnan (2005):

All human beings have a genetic map, which can be very similar in all individuals, but it's when human organicity relates to their environment that genes manifest in one way or another. From intrauterine life to old age, the emotional and social environment shapes and forms the expression of genetic inheritance imperceptibly (p. 24-25).

These authors also assert that "one of the most important components of emotional relationships that shape a healthy person is the fact of having been cared for, protected, and educated during crucial periods such as childhood and adolescence. These processes are called 'good treatment' and are essential for the survival of our species" (Barudy and Dantagnan, 2005).

In other words, if family life is to be based on relationships rooted in mutual respect and care, it will implicitly lead to an improved environment, fostering that individuals within a family unit (especially those in the early stages of development, be it infancy or childhood) develop and grow in positive, protective, and comforting emotional environments. These environments regulate stress and alleviate the needs that must be satisfied during periods of intense stress (Barudy and Dantagnan, 2005; Hernández, 2018). The good treatment that occurs among family members or in the nurturing core of individuals in their early stages serves as the fundamental driving force behind the ability to interact with others. It shapes character and, therefore, personality, with the implicit goal of achieving balanced emotional health (Barudy and Dantagnan, 2005).

It has been said that children exposed to positive attachment figures, who attend to their needs, will be capable of internalizing positive self-representations, forging individuals who recognize their own worth. However, those who have been exposed to attachment figures that display abuse or intolerance projected by their caregivers will develop negative behaviors associated with self-devaluation and other related issues (Cassidy, 2000). These internalizations can create a clear tendency for children to enter into pathological relationships marked by codependency as they grow.

Additionally, Mansilla (2002) in his research "analyzes correlations that arise from factors related to family dysfunction and codependency." The results of this process help us understand that when there are signs of family dysfunction, there are strong indicators associated with codependency. This means that "the greater the family dysfunction, the greater the patterns of codependency inherited by individuals within that unit," and implicit indicators of self-denial among one another will be present (p.15-16).

Thus, the results obtained showed that the prediction of codependent behaviors [in adolescents] is highly influenced by the type of family relationship experienced within their family unit, in addition to signs of codependency, there is disunity among the members (Mansilla, 2002).

A relevant finding from Mansilla's study (2002) is that "women scored higher than men in codependent behaviors." This aspect is also addressed by various authors (Rodríguez, 2013; Mellody, et al., 2012; Neal, 2019), who determine that, in terms of gender, women often tend to adopt a codependent role in the majority of cases.

Additionally, in Vargas-Mendoza and Hernández-Herrera (2012), a study was conducted to assess codependent traits in wives of individuals with substance abuse issues. The study included 15 women, all of whom were wives or partners of alcoholics who attended Al-Anon groups in the city of Oaxaca, which is contextually relevant to the Guatemalan population. The study demonstrated that the examined participants showed high levels of codependency toward their alcoholic partners, "the vast majority with a level of mild codependency and only 5% with a level of moderate codependency" (p.28).

On the other hand, Rolland and Walsh (as cited in Colli, 2019) state that various research has determined that families tend to display unity in their behaviors. However, when they are affected by painful marital relationship dynamics, the term "identified patient" is used, referring to the individual most affected by dysfunctional parental actions (p. 203). In other words, there is a greater likelihood that this family member will repeat the role of the parent who abuses psychoactive substances or the parent who tolerates the problematic behavior of their partner in their adult life.

### **Addictive Love**

Mellody, et al., (2012) describe a person involved in a codependent relationship as "a love addict, someone who relies on or becomes compulsively focused on taking care of another person" (p. 21).

In the 1980s, a study conducted by specialists at the New York State Psychiatric Institute revealed that "excessive love" can cause effects on the nervous system similar to those produced by ingesting an excessive amount of amphetamines. The study concludes, arguing that when an individual is exposed to an irresistible and anxious need



Guaranteeing the need to be with them, it is similar to what is known as the "craving" effect, which is equivalent to what a person with addiction-related pathologies typically experiences (Sophia, Tavares, & Zilberman, 2007).

But what do we mean when we refer to the addiction of love? In response to this question, it refers to the search for support that a person needs for themselves, depending on another to fulfill unmet needs or voids, which must serve the purpose of avoiding fear, reducing any perceptible or imperceptible emotional pain by the affected individual. It is also the pursuit of solving a problem with the purpose of maintaining emotional balance, as long as it fulfills the conditions of affection that the affected individual usually needs or demands.

In the theory of Mellody et al., (2012), "three main characteristics of addictive love are defined: [first] it assigns a disproportionate amount of attention and time to the other and often has an obsessive quality about them; [second] it has unrealistic expectations about the person and the relationship with them; [third] it strives to take care of others and only values itself in comparison to those others" (p. 27-31).

These authors determine that one of the characteristics of love addicts is often associated with the role each member plays in a romantic relationship. Men often model the role of avoidance, and in women, the most prominent trait is what we know as "love addict," in other words, the "codependent role." However, the same effect doesn't always occur according to gender, as sometimes roles are reversed. Nevertheless, the male gender tends to develop other types of addictions that arise from their "avoidant" behavioral response, for example, excessive and immoderate addiction to alcohol, work,

gambling, or even sports, among others (Mellody, et al., 2012). Anyone who has been exposed to unhealthy relationships during their childhood is likely to have experienced consequences similar to a codependent relationship.

"Codependents have very little idea of how to relate intimately and appropriately to someone once they come to understand that their old ways are destructive, abusive, and addictive" (Mellody and Miller, 2012).

#### The Role of the Codependent in Sustaining Substance Use in a Couple

Authors such as Pérez (1992), Caballo (2004), and Noriega (2013) have been interested in finding explanations or answers to the negative causes generated by the "etiopathogenesis of alcoholism" and the impact it often has on the development of individuals within their family units. This has allowed them to determine that individuals exposed to parents with alcohol addictions or related histories tend to develop behaviors or personality disorders in their children.

According to Izquierdo and Gómez (2013), "in a relationship composed of an addicted person and a non-addicted one, the sober person continually seeks the presence of the other as if they were hooked to it to feel satisfaction and pleasure in the same way an alcoholic does with alcohol."

Usually, when one or both individuals in a romantic relationship consume alcohol, their behaviors and response mechanisms are vulnerable to each other's influence, whether it's due to the attitudes generated or surrounding the circumstance or the contingencies employed. This is why Lloret (2001) and Gonzalez & Magos (2012) assert that not only is intervention necessary but also the collaboration of the partner in the

For Lloret (2001), the close relationship established between spouses is necessary to provide solutions to the phases both will face in this type of addiction. Like people who tend to abuse other substances, they usually go through stages known as "pre-contemplative," where those exposed to these circumstances (the addict and their family) are not aware of the problem posed by their addiction. This is when the partner faces what is called the "tolerance phase," thus creating a repetitive codependent cycle of forgiveness or maintaining a passive attitude towards the problem caused by alcoholism. "The contemplation of the addict would resemble the restlessness stage of the spouse, in which the latter begins in a more covert manner to try to control the other's alcohol consumption. And possibly the phase of intolerance and defense of the partner represents the phase of action reached by the alcoholic, leading him to resolve, or attempt to resolve his problem" (Lloret 2021, p. 119).

This is how codependency becomes a significant risk, especially in women, as it affects their physical and emotional health, as their interpersonal relationship dynamics are interfered with by feelings that generate instability due to their environment and active relationship with a partner subject to such addictions. "Furthermore, codependent women are often involved in abusive and potentially harmful relationships" (López, et al., 2020). It is noteworthy that people with codependent characteristics typically maintain strong bonds with their partners, despite being exposed to situations of abuse, suffering, violence, or stress. As Noriega and Ramos (2002) and López et al. (2020) affirm, women also tend to develop emotional addictive pathologies or behaviors similar to those

individuals affected by substance use, also in a condition of addiction.

## Method

A correlational quantitative study was conducted with the aim of measuring the degree of relationship between the variables under investigation. Two specific tests, developed in a Mexican context with similarities to the Guatemalan sociocultural context, were used. The data collection was carried out using the online platform Google Docs.

The study was executed with an intentional and selective sample consisting of 33 adult women who had been in a romantic relationship for more than two years. They either attended a self-help group or were part of the population served by a professional psychological care center. The sample selection was conducted through direct invitations and referrals among participants, within a period not exceeding two months.

The inclusion criteria were based solely on age, a minimum of two years in a romantic relationship, and residence in Guatemala City. The information provided by all participants was used exclusively for academic purposes, respecting anonymity, and complying with the regulations of the Postgraduate Department of the School of Psychological Sciences at the University of San Carlos of Guatemala. It also adhered to the guidelines and consent of the entity that distributed the psychometric tests used. For this reason, no personal data such as names or other forms of identification were requested.

## Results

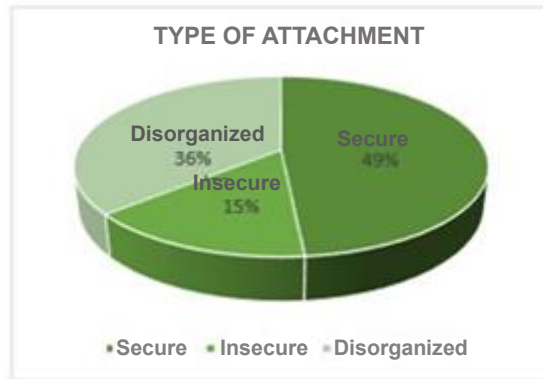
Below is the summary table of the results compiled during the fieldwork, as shown in Table 1.

Table 1. Summary table of fieldwork results

General categories of analysis	Variable	Indicators by variable	numerical information
<b>Sociodemographic information</b>	Sex	Female	33(100%)
	Marital status	Years completed Single/married/joined	Average: 4 persons, 30 years old
<b>Attachment</b>	Type of attachment	Secure/insecure/ disorganized	49% of the sample, presents a secure attachment type (16 people) people); 36% (12 people) had a disorganized disorganized attachment type and the remaining 15% (5 persons), an insecure attachment. insecure attachment.
	Global linkage index	Very low, low, intermediate, high, high, very high	17.53% (17 persons) of the sample presented an intermediate IVG; 12.38% (12 persons) a high IVG; 2.6% (2 persons) a low index; 1.3% (1 person) a very low index and finally there was no population with a very high IVG.
<b>Codependence</b>	Psychological innocence	Very low, low, intermediate, high, high, very high	Fifty-two percent (17 persons) of the sample presented an intermediate INO; 30% (10 persons) obtained a low psychological innocence; 9% (3 persons) a high INO; 9% (3 persons) a very low INO index; and finally there was no population scoring a very high INO.
	Positive codependence	Denial mechanism, incomplete identity development, emotional repression, rescuing orientation.	67% (22 persons) positive codependent.
	Probable codependence	Denial mechanism, incomplete identity development, emotional repression, rescuing orientation.	33% of the population (11 people).

Source: Own elaboration.

Figure 1. Attachment Styles of Participants

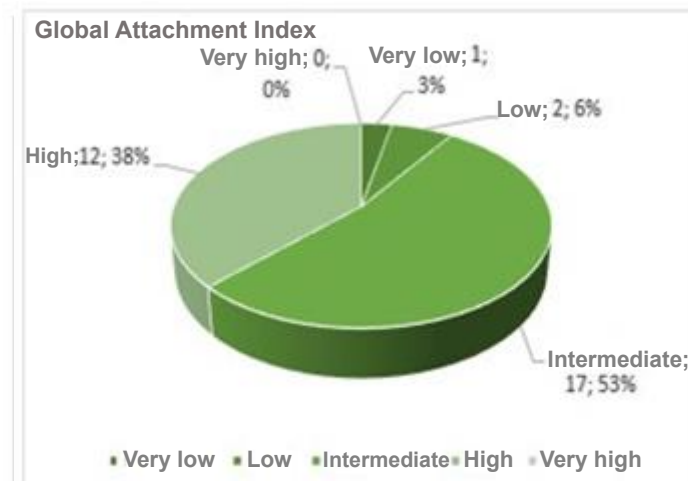


Source: Research Results. Author's own work.

49% of the sample exhibits a secure attachment style (16 individuals), characterized by comfort in relationships and flexible emotional closeness, along with the ability to maintain empathy and emotional balance in stressful situations. 36% (12 individuals) have a disorganized attachment style, characterized by psychic

disorganization based on distrust and hostile manifestations towards others. The remaining 15% (5 individuals) have an insecure attachment style, marked by emotional distancing and avoidance, often resulting in ambivalence between the need for affection and feeling overwhelmed by it.

Figure 2. Global Attachment Index (GAI)

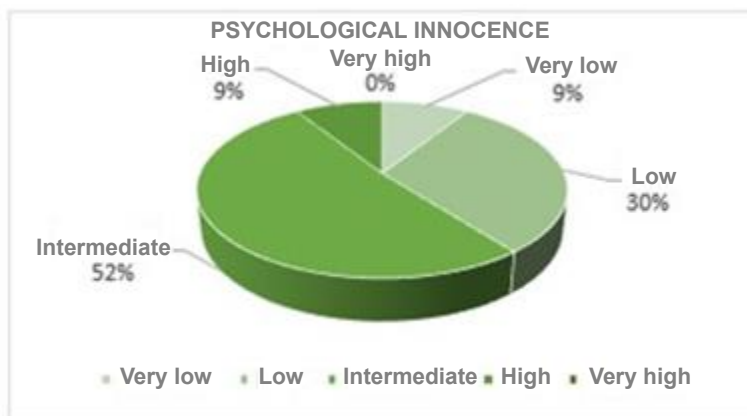


Source: Research Results. Author's own work.

The results obtained from the VINCULATEST yield a T score, translated as follows: equal to or less than 30 = very low level; 31 to 40 = low level; 41 to 59 = intermediate level; 60 to 69 = high level, and greater than or equal to 70 = very high level.

In the sample, 17.53% (17 individuals) presented an intermediate GAI, 12.38% (12 individuals) had a high GAI, 2.6% (2 individuals) had a low index, 1.3% (1 individual) had a very low index, and there was no population that scored a very high GAI.

Figure 3. Psychological Innocence (INO)

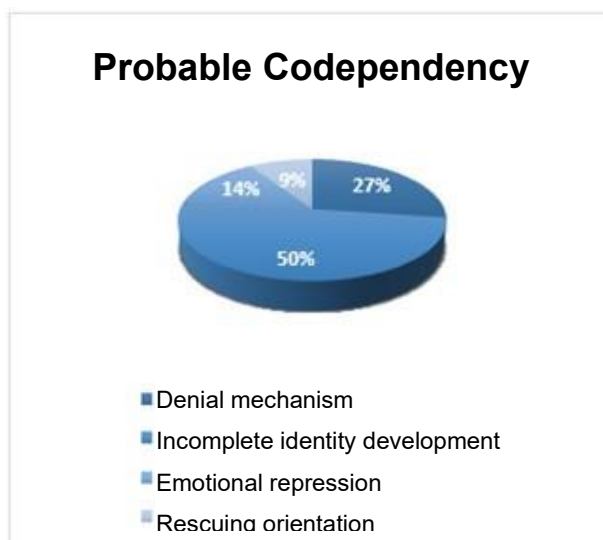


Source: Research Results. Author's own work.

The results obtained from the VINCULATEST yield a T score, translated as follows: equal to or less than 30 = very low level; 31 to 40 = low level; 41 to 59 = intermediate level; 60 to 69 = high level, and greater than or equal to 70 = very high level.

In the sample, 52% (17 individuals) had an intermediate INO, 30% (10 individuals) had a low psychological innocence, 9% (3 individuals) had a high INO, 9% (3 individuals) had a very low INO, and there was no population that scored a very high INO.

Figure 4. "Positive" Codependency

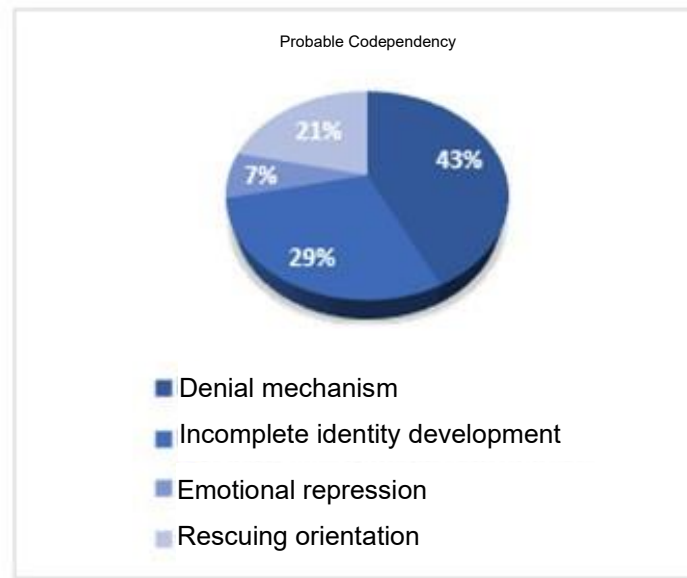


Source: Research Results. Author's own work.

Among the 67% (22 individuals) of women with a "positive" attachment type who may be vulnerable to developing codependency, incomplete development, comprising 50%

(11 individuals) of that category, translates into constant justifications and minimizations of relationship problems to avoid resolving them.

Figure 5. Probability of Codependency



Source: Research Results. Author's own work.

Substantially, 43% (6 individuals) of women in this category of probable codependency first showed significant impairment in the incomplete identity development mechanism. This indicates that probable codependency with a romantic partner is due to early paternalization, trapped in an unresolved symbiosis with parents, leading them to live to meet others' needs. In 29% (4 individuals) of women in this category, the second deficient mechanism is the denial mechanism, characterized mainly by justifying, minimizing, and tolerating mistreatment from the partner. In 21% (3 individuals), the dominating mechanism is the rescuer orientation, characterized by excessive and exaggerated responsibility, leading to involvement in situations that they dislike. The remaining 7% (1 individual)

identifies with the mechanism of emotional repression, where the woman refrains from expressing her feelings out of fear of causing problems and losing her partner's approval.

### Correlational Analysis

The result of the correlation coefficient indicates that there is a relationship between the variables under investigation. However, it is necessary to conduct a more in-depth study of the patients, as each of them comes from a different socio-cultural and biographical context. Likewise, their need for interdependent and healthy attachment may have arisen from seeking guidance and treatment for a specific event experienced in their romantic relationships.

Table 2. Correlation Coefficient

Attachment	0.30814489
Codependence	Average positive correlation

Source: Research Results. Author's own work.

### Discussion

This research extensively covers the concepts of attachment and codependency with the theoretical contributions made by various researchers, particularly the insights of John Bowlby. However, little is known about the model developed in the 1980s by Dr. Sue Johnson and Les Greenberg, who created Emotionally Focused Therapy (EFT) with the aim of helping couples to emotionally reconnect.

The contributions and foundations of this model by these psychologists are highly enriching in this research, as they provide a new perspective on why romantic relationships are inherent in all human beings. Their intervention proposal is based on "reconnecting" couples, reducing the suffering caused by emotional distance. Therefore, it provides an excellent foundation for addressing codependency cases. Furthermore, when contrasted with the theoretical foundations of Noriega and Ramos, 2002; Retana and Sánchez, 2008; Mellody, Miller, and Miller, 2012; Da Costa et al., 2017, it opens up a new perspective regarding the clinical approach to codependency.

When a person has a responsive partner, they have a secure base amid chaos. Having someone to trust for connection and support makes healing from trauma easier. A secure bond helps to cope with traumas by alleviating pain and providing comfort.

Moreover, a significant number of recent studies have expanded our understanding of the neurochemical basis of attachment. This research shows that people do develop emotional commitment. The brain is flooded with oxytocin, also known as the "love hormone." Oxytocin, related to feelings of happiness and well-being, appears to create a cascade of pleasure, comfort, and tranquility.

In humans, oxytocin is released when partners are near a loved one and have physical contact, particularly during moments of intense emotions, such as orgasm and breastfeeding. Both events are closely related to this research. Oxytocin is apparently nature's way of promoting attachment. This theory challenges Caballo's (2004) perspective, which defines codependency as a personality disorder. This is because the search for emotional security and a secure connection with a partner is essential to calm the nervous system and regain physical and emotional balance. For a wounded couple, the comfort of their partner is as desperately needed and powerful as any drug. This is also explained by science, and in Sue Johnson's words, "...it clearly indicates that emotional bonding occurs from the cradle to the grave." That is to say, staying close to a loved one who protects is the primary emotional survival strategy of the human species. This is why the type of attachment developed in childhood is so important in choosing a partner in adulthood.

Losing the connection with a partner means being in danger, as the main source of security is lost. It is possible that a codependent person loses balance and the ability to regulate emotions and cannot find a solution to the feeling of abandonment they may be experiencing. However, in healthy couples, people seek to reconnect, do what is necessary to get a response from their loved one, and this is the crucial moment for repair, which makes the difference between a love that endures and flourishes and a love that hurts and wounds, as is the case with codependency. Furthermore, it is evident that the drama of romantic attachment is an adult version of the mother-child bond.

Most importantly, these healthy relationships confirm that secure bonds offer a safe haven to protect the family from the dangers of life. Therefore, the quality of the bond has direct implications for emotional and physical health, how one copes with life, and the happiness that all human beings can enjoy.

### Conclusions and Recommendations

- The general objective set forth in the research, which aimed to determine whether there was a relationship between the type of attachment formed in childhood and the development of codependency in adulthood, was successfully achieved throughout the process. In fact, the research yielded results that suggest a positive correlation, resulting in a medium to high level for both variables studied.
- The research results also described the role of family dynamics in childhood and the development of codependency. Parents, especially the mother, are the first emotional regulators in a child's life experience, and the child requires a special connection to survive. Subsequently, in adulthood, the partner becomes the regulator of the respective emotional processes experienced by each member of the relationship because romantic relationships are also emotional bonds filled with desires, needs, and intense affections, similar to the parent-child bond.
- The research also established that there is indeed an innate need for connection. If this need is not addressed and managed assertively and reciprocally, it maintains the codependent bond in the romantic relationship. In the first two years of life, children have a pressing need for security, physical proximity, constant emotional bonding, and ignoring these needs can result in the development of affective or personality disorders that significantly impact personal and romantic relationship development in adulthood.
- The positive correlation level revealed by the research will help create an intervention proposal with the purpose of providing psychoeducation to individuals experiencing an abusive codependent relationship. Furthermore, it will offer prevention strategies to empower women to set clear and healthy boundaries in their romantic relationships.
- Train psychologists and couples therapists in the Emotionally Focused Therapy model to develop new intervention strategies and resources that allow couples to heal and redefine their romantic relationships. This will help them reconnect emotionally and foster security in their romantic lives.
- Create a program where codependent individuals can benefit from developing a personal life plan with short, medium, and long-term goals guided by explicit personal values. This program could also include support resources for the alcoholic, focused on their individual needs, and for the family as a whole.



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## About the Author

**Stefany Dulce Amely Villatoro Gaitán** holds a Master's degree in Prevention and Comprehensive Care of Addictive Behaviors, a Bachelor's degree in Clinical Psychology, and a diploma in Psychotrauma.

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