

## Life skills, sociodemographic variables and suicide risk in college students

Habilidades para la vida, variables sociodemográficas y riesgo de suicidio en  
estudiantes universitariosIván R. Hernández-Quintero<sup>a</sup> & Marco A. Santana-Campas<sup>b</sup>**Abstract:**

Objective: To determine the effect of life skills and sociodemographic variables on the risk of suicide differentiated by sex. Methodology: Non-experimental, quantitative study with a descriptive cross-sectional design, the type of sampling used was non-probabilistic by convenience. Results: Males presented a higher risk in terms of total scores of suicidal orientation with 16.2% compared to females who represented 15.2%, this difference was statistically significant. The dimensions that most affected ideation in men were low self-esteem, while in women it was low self-esteem, loneliness and isolation. It was found that marital status (single and free union-partner relationship) can increase up to 3.312 times the risk of presenting suicide risk followed by sex (3.09), occupation (2.416) and assertive communication (2.251). Conclusions: The prevalence of suicide in university students was of medium level, however, it is considered that the phenomenon of suicide at this stage should be studied, since it is the age range where most suicides are committed in the world.

**Keywords:***Life skills, suicide risk, college students, gender***Resumen:**

Objetivo: Determinar el efecto de las habilidades para la vida y las variables sociodemográficas sobre el riesgo de suicidio diferenciado por sexo. Metodología: Estudio no experimental, cuantitativo con un diseño transversal de tipo descriptivo, el tipo de muestreo que se utilizó fue no probabilístico por conveniencia. Resultados: Los hombres presentan un riesgo más alto en cuanto los puntajes totales de la orientación suicida con un 16.2% en comparación con las mujeres quienes representan el 15.2%, esta diferencia fue significativa estadísticamente. Las dimensiones que más inciden en la ideación en hombres fue la baja autoestima, mientras que en las mujeres fue baja autoestima, soledad y aislamiento. Se encontró que el estado civil (soltero y unión libre-relación de pareja) puede incrementar hasta un 3.312 veces el riesgo de presentar riesgo de suicidio seguido de sexo (3.09), ocupación (2.416) y comunicación asertiva (2.251). Conclusiones: La prevalencia de suicidio en estudiantes universitarios fue de nivel medio, sin embargo, se considera que se debe de estudiar con profundidad el fenómeno del suicidio en esta etapa, puesto que es el rango de edad donde más suicidio se cometen en el mundo.

**Palabras Clave:***Habilidades para la vida, riesgo suicidio, estudiantes universitarios, género***INTRODUCTION**

Suicide is a social and public health problem that has undoubtedly had great relevance in recent decades, with a myriad of factors associated with culture, biology, spirituality, sociodemographics and the prevalence of mental disorders in the world (Hernández-Bello et al., 2020). In data provided by the World Health Organization ([WHO], 2019) around 800,000

people commit suicide in the world every year. For 2019 the WHO provided the figure of 703,000 people who took their own lives (WHO, 2021).

In adolescents and young adults, suicide is considered the third leading cause of death in the world (Hernández-Bello et al., 2020), mainly in young people between 15 and 29 years of age (WHO, 2021). However, countries such as the United States

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(Yard et al., 2021) and Spain (Jerónimo et al., 2021) have reported that the prevalence of suicide has decreased, with children under the age of 15 years performing these acts (Benítez, 2021).

Usually, statistics on suicide show data on deceased persons and very rarely reflect suicide attempts or suicidal ideation. It is estimated to be 20 times more frequent (Jerónimo et al., 2021) or at least, about 20,000,000 people have attempted it according to Gómez-Tabares (2021). Studies such as those by Balestrieri et al. (2021) and Berardelli et al., (2021) have reported increases in attempted or suicidal ideation during the period from 2019 to 2021.

The latter is part of the so-called suicidal behavior that includes, suicidal ideation, planning, attempt and finally to consummated suicide (Salvo & Melipillán, 2008). For this, Domínguez et al. (2016), taking into consideration what the WHO (2014) says, establishes some of the possible factors that can cause suicidal behavior, such as mental disorders and pathologies, harmful drug use, hopelessness, family history, psychological resources, self-esteem and the condition of being a student, among others. In Mexico in the year 2021 there was a suicide rate of 6.2% per 100,000 inhabitants, being one of the highest rates recorded nationally, the ages that comprised this rate was 18 to 29 years (Valdez-Santiago et al., 2023). In the research conducted by Valdez-Santiago et al., (2023) it was concluded that within the national territory, the trend has increased in terms of the prevalence of suicidal behavior, specifically in this age group, even the age of suicide attempt has decreased to 10 to 12 years of age.

In the state of Jalisco for the year 2012 the number of suicides increased by 47% compared to the previous year and it was estimated that there were almost 500 suicides during 2012. Among which the deaths of 49 minors stand out, 26 adolescents at the secondary level (Arenas, 2019).

A decade later, with data provided by INEGI (2023) shows that in 2022 there were a total of 654 deaths by suicide, of which 82.3% were men who performed such act and the remaining 17.7% were women, this only in the state of Jalisco, which indicates a slight increase compared to the last ten years.

However, the highest figure that has been established in this state was in the year 2021 during the pandemic confinement, the suicide rate reached 728 deaths. Of which, again, men were the ones who died the most with 84.6% and 15.4% for women (INEGI, 2022).

With all of the above, university students have become a population at risk for some affectations such as academic stress, depression, anxiety, substance use, suicidal risk and suicide (Santana et al., 2020). Therefore, during this stage of life, there is a presence of suicidal risk and attempt, the entrance to the university can be a very significant event full of stressors and psychosocial risk factors (Tabares et al., 2019).

In the research conducted by Hidalgo-Rasmussen et al., (2019) in a population of Mexican first-time university students, reported that hopelessness is associated with suicidal risk

behavior, this being the first triggering factor of this phenomenon, so it is considered a central point for an intervention.

However, let us remember that suicide is multicausal and in college students academic stress is an important factor that elicits suicidal ideation (Wild et al., 2004). Micin and Bagladi (2011) say that, in the university student, physical, social, cultural and psychological factors are involved mainly in that student who changes his residence and a bad adaptation generates a suicidal risk (Trujillo, 2013).

How a protective factor for the risk of suicide has been of interest life skills, in this sense, in 1994 the WHO designed as a prevention and promotion strategy the formation of life skills being these competences that favor the social, psychological and emotional development of people.

While strengthening life skills allows reducing risk factors, mainly those that have to do with suicidal ideation, attempts and behavior (Blandón, et al., 2015).

Santana et al. (2020) highlight the need to promote life skills for the formation and integral development of university students, in addition to helping in stressful situations that academic and daily life itself generates.

Given this, it is relevant to study how the phenomenon of suicide has impacted university students in relation to their life skills, being this an important population that has higher levels of incidence in terms of suicide, which is why the objective is to determine the effect of life skills and sociodemographic variables (sex, age, marital status, occupation, with whom they live and educational program) on the risk of suicide differentiated by sex.

## **METHOD**

### ***Design***

A non-experimental, quantitative study with a descriptive cross-sectional design that does not seek to provoke or manipulate a variable, but only seeks to collect data and a sample of a given moment in order to analyze and compare them with sociodemographic variables (Hernández et al., 2003). The type of sampling used was non-probabilistic by convenience.

### ***Participants***

The working population consisted of a total of 319 active students of a public university in the state of Jalisco belonging to the educational programs of Psychology, Nursing, Social Work, Law, Nutrition, Tourism, International Business, Dentistry, Medicine and Engineering. Within which 78.7% were women and 21.3% were men, with an average age of 20.83. The only requirement for participation was that they were students belonging to the chosen university and that they gave their informed consent to participate freely and voluntarily.

### ***Procedure***

The students responded by means of a form in Google Drive to the instrument, it is emphasized that if they did not give their consent the form did not allow them to answer the

questionnaires, from there the answers were coded in an Excel document to later be passed to the Statistical Package for the Social Sciences software (SPSS.V.25) for their respective data analysis.

### **Instruments**

The *Suicide Orientation Inventory* (ISO-30) is an instrument proposed by King and Kowalchuk (1994) that measures suicidal orientation from a multifactorial perspective. It is composed of five dimensions; Low self-esteem, Inability to cope with emotions, Hopelessness, Loneliness and Isolation, and Suicidal Ideation. Each dimension is composed of 6 items and is answered by means of a Likert scale organized as follows 0: Strongly Disagree, 1: Somewhat Disagree, 2: Somewhat Agree, 3: Strongly Agree (King & Kowalchuk, 1994).

This instrument was validated and adapted to Spanish by Liporace and Casullo (2006) and the internal consistency by means of the Alpha Cronbach was 0.87. In Mexico, there is a version validated by Valdés-García and González-Tovar (2018), who performed exploratory factor analysis, likewise, they reported that the instrument with a sample of Mexican youths had adequate validity and internal consistency. I feel this version was the one used in the present research.

For the Life Skills instrument, the short version of 40 items proposed by Santana-Campas et al. (2024) was used, since it is a validated version for the Mexican population that maintains the ten original dimensions proposed by the WHO (1994), and these results show adequate reliability, with acceptable psychometric properties, which gives security to the instrument.

This instrument is composed of three dimensions which are Cognitive, Social and Emotional Skills, of which 10 sub-dimensions are divided into four items in each sub-dimension, having the following sub-dimension:

Cognitive: Self-awareness (items 1 to 4), Decision-making (items 17 to 20), Creative Thinking (items 25 to 28), Critical Thinking (items 29 to 32).

Social: Empathy (items 5 to 8), Effective and Assertive Communication (items 9 to 12), Interpersonal Relationships (items 13 to 16), Problem Solving and Conflict Resolution (items 21 to 24).

Emotional: Management of Feelings and Emotions (items 33 to 36) and Stress Management (items 37 to 40).

The response options are always (5), almost always (4), sometimes (3), almost never (2) and never (1). Items 2, 4, 5, 7, 8, 8, 9, 11, 14, 16, 21, 22, 24, 35, 36, 37 and 38 are scored negatively and the rest are scored positively. In addition to the 10 scales measuring Life Skills there are three dimensions.

### **Ethical considerations**

Within the ethical considerations, the Code of Ethics of the Psychologist and the Regulations of the General Law of Health on Health Research were taken into account, which take care and provide for the care of the participant, in addition to protecting confidentiality, personal data, all participants were over 18 and

gave their informed consent in which they were guaranteed respect for their human rights of non-maleficence, autonomy and beneficence. This work is part of a larger research that aims to conduct an intervention to reduce suicide risk, which is endorsed by the academic board of the Master in Human Development, Education and Interculturality, a collegiate body empowered by university regulations to review, approve and monitor the research process within the graduate program.

### **Data analysis**

The data obtained were processed by means of the Statistical Package for the Social Sciences (SPSS.V.25) software, the sociodemographic data were analyzed under descriptive analysis. Cross tables were made to compare the results of the sample with the dimensions that have the instrument, likewise a sex table was made to see to know their results in each of the dimensions of the suicide instrument, a comparative table was made with the global results of the instrument differentiated by sex and, finally, a logistic regression model was made, which was with the method introduce variables simultaneously, in addition the odds ratio was calculated under the 95% confidence interval (IC95%), to determine the goodness of fit the Chi-square tests were used ( $< .05$ ), Hosmer and Lemeshow, Cox and Snell R<sup>2</sup> test and Nagelkerke's R<sup>2</sup>. In reliability the Suicide Orientation instrument and a Cronbach's alpha of .92 was obtained indicating that the instrument is suitable for application. While the Life Skills instrument had an overall  $\alpha$ : .92.

## **RESULTS**

As mentioned before, the objective of this research was to determine the effect of life skills and sociodemographic variables (sex, age, marital status, occupation, living with and educational program) on the risk of suicide differentiated by sex. The following will show the results found in the research, remembering that the objective was to determine the prevalence of suicide in university students differentiated by sex in a public university in the state of Jalisco, for this, the way in which the results are presented has been ordered.

Table 1 shows the predominance of the female sex with 78.7% of the participants in comparison with the male sample of 21.3%. In spite of the fact that a sample of the largest possible careers was obtained, the responses obtained by the Social Work, Nursing and Psychology bachelor's degrees stand out.

It is worth noting that the majority of students still live with their parents (48.0%), followed by students who have left home and currently live with friends, classmates or alone (27.2%), people who live with other family members (11.0%) and the few who live with their partner (7.8%), a very small sample said they live alone (10.0%). Likewise, 61.1% of the students are dedicated only to being full-time students and the remaining 38.9% have had to share their studies with work.

Table 2 describes the prevalence of the dimensions of the suicide risk instrument and their overall prevalence in both men and women. It is interesting to note that in all the dimensions (low

self-esteem, hopelessness, inability to cope with emotions, loneliness and isolation, and suicidal ideation) ranges from 59.6% to 69.3% within the medium risk level.

**Table 1**

*Description of sociodemographic variables*

Variable	X	n	%
Age	20.83		
<i>Gender</i>			
Women		251	78.7
Man		68	21.3
<i>Degrees</i>			
Social Work		79	24.8
Psychology		61	19.1
Nursing		68	21.3
Lawyer		16	5.0
Tourism		18	5.6
International Business		19	6.0
Nutrition		15	4.7
Medicine		14	4.4
Veterinary		14	4.4
Engineering		9	2.8
Dentistry		6	1.9
<i>Currently living with:</i>			
Parents		153	48.0
Partners or Friends		87	27.2
Other relatives		35	11.0
With partner		12	3.8
Alone		32	10.0
<i>Occupation</i>			
Full-time student		195	61.1
Studying and working		124	38.9

Note: X= Average, n= Frequency. Own elaboration

Some data that may seem interesting are in the dimension of Low self-esteem that results in a total of 54 students (16.9%) in a high risk level, in the category of Loneliness and isolation 49 (15.4%) students have expressed having these feelings, finally, the dimension of Suicidal ideation that presents 45 students (14.1%) in the highest risk level.

In Table 3 we can observe the prevalence of both women and men within each of the dimensions presented by the ISO. Within the first dimension, Low self-esteem, the trend indicates that the risk presented by women is within the medium level with 62.2% of the responses; however, it is noteworthy that 15.9% have expressed low self-esteem at a high level; in comparison with the other dimensions, it is among the highest responses at that level. On the other hand, the male population is distributed as follows: low level (23.5%), medium level (55.9%) and high level (20.6%), which appears to be within the normal range.

In turn, hopelessness obtains 20.3% in the high level, followed by 66.5% in the medium risk level and, finally, the low level with 20.3%, something similar happens with men, distributed mostly

within the medium level with 66.2%, followed by the low level with 25% and very little in the high level with only 8.8%.

In the third dimension which is inability to cope with emotions we obtain interesting results, 14.3% for women and 29.4% in men within the low level, placing its majority within the medium level 71.7% in women and 60.3% in men, finally, the high risk level places 13.9% for women and 10.3% in men, it should also be mentioned that this dimension had a p. value of .14, which is statistically significant.

**Table 2**

*Prevalence of suicide risk by dimensions (n = 319)*

Dimensions	Level of risk	n	%
Low self-esteem	Low	71	22.3
	Medium	194	60.8
	High	54	16.9
Hopelessness	Low	68	21.3
	Medium	212	66.5
	High	39	12.2
Inability to Cope with Emotions	Low	56	17.6
	Medium	221	69.3
	High	42	13.2
Loneliness and Isolation	Low	65	20.4
	Medium	205	64.3
	High	49	15.4
Suicidal Ideation	Low	84	26.3
	Medium	190	59.6
	High	45	14.1

Note: n= Frequency. Own elaboration

In loneliness and isolation, we continue to observe how within the medium level a large part of the population is encapsulated 63.7% in women and 66.2% in men, the high level shows the highest number of responses obtained by a woman in comparison with the other dimensions with 15.9%, while in the case of men it is only 13.2%, not an alarming result in comparison with others.

Finally, in suicidal ideation the results continue to show that within the medium level (62.2%) the female population stands out more than in the low (24.7%) and high (13.1%) levels. While, in men, it is important to talk about this dimension, because, although it seems a small sample, it is worrying to see 17.6% of the male population located in the high level of the population, in comparison with that of women, is slightly higher, for the other levels we obtain 32.4% in the low level and in the medium level 50% respectively of the male population.

Within Table 4 we have the prevalence of suicide with its differentiation by sex and shows us the levels in which each sex is found, for example, we can notice through the percentages that men present a high risk in terms of total scores of suicidal

orientation with 16.2% compared to women who represent 15.2% these data are supported under the significance of .032.

**Table 3.**  
*Prevalence of suicide risk by dimensions differentiated by sex. (n=321)*

Dimensions	Level of risk	Mans		Womens		X <sup>2</sup>	Gl	P
		n	%	n	%			
Low self-esteem	Low	55	21.9	16	23.5	1.093	2	.579
	Medium	156	62.2	38	55.9			
	High	40	15.9	14	20.6			
Hopelessness	Low	51	20.3	17	25	1.369	2	.504
	Medium	167	66.5	45	66.2			
	High	33	13.1	6	8.8			
Inability to Cope with Emotions	Low	36	14.3	20	29.4	8.470	2	0.14**
	Medium	180	71.7	41	60.3			
	High	35	13.9	7	10.3			
Loneliness and Isolation	Low	51	20.3	14	20.6	.305	2	.858
	Medium	160	63.7	45	66.2			
	High	40	15.9	9	13.2			
Suicidal Ideation	Low	62	24.7	22	32.4	3.824	2	.194
	Medium	156	62.2	34	50			
	High	33	13.1	12	17.6			

Note: n= Frequency, X<sup>2</sup> = Chi2 Coefficient, \* p<.05, \*\*p <.01, \*\*\*p<.001. Own elaboration

Table 5 shows a binary logistic regression model; this is a final model that explains 24.2% of the suicide risk variable (Nagelkerke's R<sup>2</sup> = .242) a number of variables that can predict suicide risk in college students were taken into account. The odds ratio values

**Table 4.**  
*Prevalence of suicide risk differentiated by sex. (n = 319)*

Level of risk	Mans		Womens		X <sup>2</sup>	p.
	n	%	n	%		
Low	20	29.4	40	15.9	6.915	.032*
Medium	37	54.4	173	68.9		
High	11	16.2	38	15.2		

Note: n= Frequency, X<sup>2</sup> = Chi2 Coefficient, \* p<.05, \*\*p <.01, \*\*\*p<.001. Own elaboration

Among these parameters it was found that gender, i.e., being male or female increases the suicidal risk up to an exponential of 1.350 (95% CI = .598 - 3.094), here it is worth mentioning that there was a higher proportion for female than male gender and this may be a bias within the results.

In turn, age turned out to be an important factor to consider within the suicidal risk, the mean age was 20.83, this factor had a low exponential of .990 (CI 95 = .891 - 1.101); however, university students are among the range of prevalence of higher suicides committed according to Valdez-Santiago et al. (2023). The occupation of the student, whether they are dedicated to being a full-time student or student worker has a predictor of 1.200 (95% CI = .596 - 2.416) as well as marital status, noting that again there was a higher proportion in people who were single, but there was a significant sample in those who were

married or widowed counts with the exponential of 1.179 (95% CI .420 - 3.312).

In this context, being a university student implies mostly leaving home and starting to become independent living alone, with friends, some still with their parents or living with other relatives, this was also a risk predictor of suicide having the 1.144 (95% CI = .869 - 1.505).

Among the variables that coincide within the suicidal risk in college students are assertive communication which has an exponential of 1.112 (95% CI = .549 - 2.2251), followed by emotion management with a prediction of .592 (95% CI = .310 - 1.129), in turn interpersonal relationships generate part of these predictors of suicidal risk being its exponential .269 (95% CI = .131 - .553), empathy .457 (95% CI = .457 - 1.743) and finally decision making .225 (95% CI = .225 - 816).

Given this, we can say that the significance is low, but that the model itself has exponentials that become significant, which helps us to reliably predict that these variables are related to suicidal orientation in college students.

## DISCUSSION AND CONCLUSIONS

The prevalence of suicide risk is higher in women mainly in the dimension of low self-esteem, however, in general, men (16.2%) have a higher suicide risk compared to women (15.2%). This is differentiated to what was found by Sibato and Salamanca (2015) where in a high level of suicide women represent 33.3% and men 28%. In general, the prevalence of suicide risk is higher in males (16.2%) than in females (15.38%), perhaps a little far from what was found by Jiménez et al. (2022), which was 22.9%, considering that their sample was almost 350 students who agreed to participate. Continuing with what was reported by Jiménez et al., (2022) regarding age, they found that the mean age was 20.1 for the high prevalence of suicide risk, while in this

research it was 20.8, as for the population the tendencies in both cases are towards the female population with a total of 253 and

in males of 97, in this research it was 251 in females and 67 in males.

**Table 5.**

*Binary logistic regression model for predictor variables of suicide.*

Variables	B	Standard error	Wald	Gl	p	Exp(B)	C. I. 95%	
							Lower	Top
Gender	.300	.423	.504	1	.478	1.350	.589	3.094
Age	-.010	0.54	.032	1	.858	.990	.891	1.101
Occupation	.182	.357	.260	1	.610	1.200	.596	2.416
Marital Status	.165	.527	.097	1	.755	1.179	.420	3.312
Who They Live With	.134	.140	.918	1	.338	1.144	.869	1.505
Assertive Communication	.106	.360	.087	1	.768	1.112	.549	2.251
Emotional Management	-.524	.329	2.533	1	.111	.592	.310	1.129
Interpersonal Relationships	-1.314	.368	12.724	1	.000	.269	.131	.553
Empathy	-.114	.342	.112	1	.738	.892	.457	1.743
Decision-making	-.844	.327	6.656	1	.010	.430	.225	.816
Constant	2.183	1.369	2.544	1	.111	8.877		

Note: B = Regression coefficient, gl = Degrees of freedom, Exp(B) = Estimated odds ratio (ODD ratio), C. I.= Confidence interval of Exp B; Variables are significant at the level: \*p<.05, \*\*p<.01, \*\*\*p<.001.

Model Summary: Hosmer and Lemeshow test: X<sup>2</sup> = 10.815, p = .212, Cox and Snell R<sup>2</sup> test = .139, Nagelkerke R<sup>2</sup> test = .242.

This study also made it possible to identify the most influential dimensions in relation to risk that may be affecting both men and women, in the case of the most prevalent dimensions in women are low self-esteem and loneliness and isolation. Gavira et al. (2009) in their study in a Colombian population found as the main finding women with major depression who have had a history of suicide due to spending a lot of time in solitude.

Zapata and Arredondo (2012) see loneliness as closely linked to self-esteem, also based on the argumentation of Expósito and Moya (1999) where those people who are surrounded by other people generate more positive feelings towards themselves, increasing self-esteem, compared to those people whose social circle is very small or almost null.

As for men, low self-esteem and suicidal ideation were the most prevalent dimensions, the most worrying in the correlations that may exist in both. However, in a brief study conducted by (Montes-Hidalgo & Tomás-Sábado, 2016) in nursing students a negative correlation was obtained (r = -.541) with a significance (p < .01) for these two dimensions.

As a conclusion, suicide is a public health problem worldwide, the incidence in students is high, a differentiation between sexes can be noticed, which may be due to the culture that the country presents. As for students, the prevalence is high, the university stage is the one with the highest suicide risk; further research should be done on issues such as, for example, which careers have a higher incidence than others, correlations should be made to see if a differentiation can be generated by thematic areas of study or if the shift and semester they are studying is a trigger of higher suicide risk in students.

Regarding the ten life skills, it is highlighted that those with the greatest effect on the risk of suicide were assertive communication, emotion management, interpersonal

relationships, empathy and decision making, these being considered as protective or risk factors for suicide and other mental health problems (Santana-Campas, et al., 2020; Santana-Campas, et al., 2024).

On the other hand, the results indicate that, among the variables assessed, interpersonal relationships (B = -1.314, p < .001) and decision making (B = -0.844, p = .010) are significant. Specifically, interpersonal relationships have an odds ratio (Exp(B)) of 0.269, suggesting that better quality interpersonal relationships significantly reduce the likelihood of suicide. Similarly, adequate decision making is associated with a lower probability of suicide, with an Exp(B) of 0.430. This highlights the importance of these social and emotional skills in suicide prevention in college students.

Likewise, an unexpected finding was that, in the logistic regression model, sex, age, occupation, marital status, with whom they live, assertive communication, emotion management and empathy were not significant in this model, since their p-values are greater than 0.05, but removing them from the model reduces all the indicators; this can be interpreted as meaning that on their own they are not significant, but in conjunction with the rest of the variables analyzed. In addition, the model presents a good overall fit according to the Hosmer and Lemeshow test (X<sup>2</sup> = 10.815, p = .212), and the Cox and Snell (.139) and Nagelkerke (.242) R<sup>2</sup> values indicate that the model explains between 13.9% and 24.2% of the variability in the occurrence of suicide. These findings underscore the importance of focusing on improving interpersonal relationships and decision-making skills as part of suicide prevention strategies.

Finally, the practical implications of these findings are significant in several areas, especially in mental health and public policy making. First, mental health professionals can use

this information to focus their interventions on improving their patients' interpersonal relationships and decision-making skills. Cognitive behavioral therapy (CBT) programs and social skills-based interventions could be particularly useful, as these approaches can help people develop better strategies for interacting with others and making more effective decisions, thereby reducing the risk of suicide.

In addition, educational institutions and community organizations can implement skill-building programs that strengthen interpersonal relationships and decision-making from an early age. These programs can include workshops, group activities, and specific curricula that teach and reinforce these skills. Public policy can also benefit from these findings by funding and supporting initiatives that promote mental health and social well-being.

### Limitations

One of the main limitations was that there was no homogeneity in the responses obtained by the different degree programs and by the sample of men and women, and it is possible to see an imbalance in both the population in the question of gender and the careers they pursue. Finally, another of the limitations that we see is social desirability, this phenomenon that influences the behavior of the norms that are established in society to obtain its approval (Edwards, 1957), i.e., there is a tendency to show irrationally positive or negative in society, which can generate distortion in the results (Palhus, 2002; Popovych et al., 2021).

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