

Depression, suicide ideation, and irrational beliefs: Explanatory models in psychology students

Pedro David Rosas-Fuentes,¹ Karla Patricia Valdés-García,¹ Iris Rubí Monroy-Velasco,² Bárbara de los Ángeles Pérez-Pedraza,¹ Luis Miguel Sánchez-Loyo³

¹ Facultad de Psicología, Universidad Autónoma de Coahuila, Saltillo, México.

² Departamento de Psicología Social, Facultad de Psicología, Universidad Autónoma de Coahuila, Saltillo, México.

³ Centro Universitario de Ciencias Sociales y Humanidades, Universidad de Guadalajara, Guadalajara, México.

Correspondence:

Karla Patricia Valdés-García
Facultad de Psicología, Unidad Saltillo, Universidad Autónoma de Coahuila, Saltillo, México.

Unidad Camporeddondo s/n,
Edificio G Planta Baja,
C.P. 25280, Coahuila, México.
Phone: +52 844 104-1198
Email: karlavaldes@uadec.edu.mx

Received: 8 September 2022

Accepted: 26 October 2022

Citation:

Rosas-Fuentes, P. D., Valdés-García, K. P., Monroy-Velasco, I. R., Pérez-Pedraza, B. de los A., & Sánchez-Loyo, L. M. (2023). Depression, suicide ideation, and irrational beliefs: Explanatory models in psychology students. *Salud Mental*, 46(2), 61-67.

DOI: 10.17711/SM.0185-3325.2023.009



ABSTRACT

Introduction. In rational emotive behavioral therapy, irrational beliefs are significant in mental health since their presence leads to conditions such as depression and suicidal ideation. Since these conditions have been increasing worldwide, it is essential to explore the factors that contribute to their understanding. **Objective.** To design explanatory models for depression and suicidal ideation based on irrational beliefs in psychology students. **Method.** Quantitative, non-experimental, cross-sectional study with multivariate analysis. **Results.** Two explanatory models were designed: one for depression and the other for suicidal ideation. Thirty-nine per cent of depressive symptomatology can be explained by the presence of irrational beliefs concerning perfectionism, avoidance of responsibilities, concern over the future, and the determinism of the past. At the same time, 54% of suicidal ideation can be explained by the presence of beliefs centering on perfectionism, avoidance of responsibilities, external locus of control, and the determinism of the past. **Discussion and conclusion.** Depression and suicidal ideation in psychology students can partly be explained by irrational beliefs concerning perfectionism, external locus of control, concern over the future, avoidance of responsibilities, and the determinism of the past. Clinical care approaches can modify these beliefs to reduce symptoms and promote mental health.

Keywords: Mental health, depression, suicide, suicidal ideation, irrational beliefs.

RESUMEN

Introducción. Para la terapia racional emotiva conductual las creencias irracionales tienen un gran peso en la salud mental, ya que la presencia de estas genera padecimientos como depresión e ideación suicida. Se sabe que en el mundo estos padecimientos han ido en aumento, por ello, es importante explorar factores que faciliten su explicación. **Objetivo.** Generar modelos explicativos para la depresión y la ideación suicida desde las creencias irracionales en estudiantes de psicología. **Método.** Estudio cuantitativo, no experimental, transversal con análisis multivariado. **Resultados.** Se realizaron modelos explicativos; uno para la depresión y otro para ideación suicida. La sintomatología depresiva se explica en 39% con la presencia de creencias irracionales de perfeccionismo, evitación de responsabilidades, preocupación por el futuro y determinismo del pasado. Por otro lado, la ideación suicida se explica en 54% con la presencia de las creencias de perfeccionismo, evitación de responsabilidades, locus de control externo y determinismo del pasado. **Discusión y conclusión.** La depresión e ideación suicida en estudiantes de psicología se puede explicar en parte por creencias irracionales de perfeccionismo, locus de control externo, preocupación por el futuro, evitación de responsabilidades y determinismo del pasado. A través de enfoques de atención clínica es factible modificar dichas creencias con el objetivo de disminuir sintomatología y promover la salud mental.

Palabras clave: Salud mental, depresión, suicidio, ideación suicida, creencias irracionales.

INTRODUCTION

Mental health is a global topic of interest due to the increasing prevalence of mental disorders, with depression being the most frequent worldwide (World Health Organization [WHO], 2021), and suicide the worst outcome. In Mexico, approximately fifteen million people report some type of mental illness, with depression being the most common (Secretaría de Salud, 2020). Moreover, according to the National Institute of Statistics and Geography (INEGI, 2021), from 2018 to 2020, the suicide rate rose from 5.4 to 6.2 per 100,000 inhabitants, with young people aged between 18 and 29 comprising the group with the highest rate (10.7).

To better understand these phenomena, it is essential to define each one. Depression is characterized by low mood, persistent sadness, feelings of worthlessness and guilt, as well as a lack of interest in previously rewarding activities (WHO, 2021).

Ellis and Grieger (1990) proposed an explanatory model of depression in which people feel guilty, see themselves as incapable and self-defeating, and think they are failing to control their lives. In this proposal, clinical intervention focuses on modifying irrational beliefs such as the following: *you must be successful in life, you must obtain approval, other people should treat you decently, life should not be so complicated and it is horrible when life does not turn out the way you would like.*

Suicidal ideation refers to thoughts about taking one's own life (Turecki et al., 2019). The explanatory model of suicide proposed by O'Connor, called the motivational-volitional model (MVM), comprises three phases: pre-motivational, motivational, and volitional. The pre-motivational phase comprises environmental factors and life events that can cause discomfort, whereas in the motivational phase, suicidal ideation emerges as a result of ideas of defeat and/or humiliation. These beliefs are reinforced through social perfectionism, which, when not achieved, creates feelings of defeat and humiliation. Furthermore, the person believes they will never emerge from this state. This contributes to beliefs of pessimism and negative affect that encourage the feeling of being trapped in a problem that is beyond their control. Finally, during the volitional phase, a person arrives at suicidal behavior (O'Connor & Kirtley, 2018).

Irrational beliefs are absolute, rigid thoughts that make it difficult to generate states of well-being, adaptive behaviors, or goal achievement (Ruiz, Díaz, & Villalobos, 2012). Studies have been conducted that focus on examining the relationship between irrational beliefs, depression, and suicidal ideation.

A study by Dudău, Sfeatcu, Funleru, and Dumitrache (2015) on ninety Romanians pursuing an undergraduate degree in dentistry or a master's in psychotherapy found a positive correlation between irrational beliefs and depression, anxiety, and stress symptoms.

For their part, Stephenson, Watson, Chen, and Morris (2018) sought to determine the relationship between irrational beliefs, self-concept, self-esteem, and emotional disturbances in 184 university students. They observed a positive correlation between depression and low frustration tolerance.

Likewise, in Turkey, Balkis and Duru (2020) attempted to identify irrational beliefs in men and women with depression in 476 university students. They showed that demand and catastrophizing together contribute to the prediction of depressive symptoms in both sexes.

The relationship between irrational beliefs and suicidal ideation has also been explored. In Ecuador, Quimbiulco and Castro (2017) sought to identify the irrational beliefs that predispose people to attempt suicide. They studied thirty patients with suicide attempts and found that beliefs of hopelessness, guilt, and helplessness can influence suicide attempts.

A study by Bahamón, Alarcón, García, and Trejos (2015) reported the relationship between maladaptive schemes and suicidal risk in 151 psychology students from Colombia. Approximately 75% of the sample showed a medium to high level of suicidal risk, while maladaptive schemes of emotional deprivation, abandonment, self-demandingness, distrust, and insufficient self-control positively correlated with suicidal risk.

In Mexico, Córdova, Rosales, and Montufa (2015) described the characteristics of 593 high school students with suicidal ideation, finding high scores for negative outlook. They considered that irrational beliefs contribute to predicting the risk of suicidal behaviors.

The study by Flink et al. (2017) analyzed irrational beliefs, depression, and suicidal ideation in seventy-nine psychiatric outpatients in Finland, finding that patients with suicidal ideation scored higher in catastrophic beliefs.

Another study by Zou et al. (2017) explored the effects of psychological pain, finding positive correlations between negative automatic thoughts and depressive symptoms and suicidal ideation in thirty-two patients.

Lastly, in Latin America, Gómez, Núñez, Caballo, Agudelo, and Grisales (2019) evaluated 1,408 Colombian students to analyze the risk factors and predictors of suicidal behavior, finding that depression and hopelessness beliefs are among the factors that best predict suicidal behavior.

After observing the association between these three variables and realizing the social impact these mental health problems create worldwide, the authors sought to create explanatory models of depression and suicidal ideation based on the presence of irrational beliefs in undergraduate psychology students.

Proposing explanatory models for depression and suicidal ideation based on irrational beliefs, based on rational emotive behavioral therapy (REBT), will allow an explanatory vision of mental health problems from an ap-

proach which, in the first instance, has demonstrated the relationship between thoughts and emotional and behavioral symptoms. At the same time, there is also evidence of the effectiveness of interventions using this approach to improve mental health, reduce problems and generate rational thoughts (Ellis & Grieger, 1990). According to REBT, these beliefs affect mental health in general. However, this study points out how they can contribute to depressive states and suicidal ideation.

METHOD

Study design

This is a quantitative, non-experimental, cross-sectional study, with multivariate analysis (Lévy & Varela, 2006).

Subjects

Non-probabilistic, convenience sampling was used to secure a total of 391 university students from a public university in northern Mexico, where the bachelor's program in psychology is taught. The sample was obtained during the time the questionnaires were available to be answered.

Instruments

The instruments applied were the Beck Depression Inventory (BDI), the Inventory of Suicidal Orientation (ISO-21) and the Adaptation of the Jones Irrational Beliefs Questionnaire.

Beck's Depression Inventory (Beck, 1988), validated in Mexico by Jurado et al. (1998), is a one-dimensional instrument that measures the depressive symptoms the subject has experienced in the past week. It contains twenty-one items, with Likert-type response options and four categories for identifying minimal (zero to nine points), mild (ten to sixteen points), moderate (seventeen to twenty-nine points), and severe depression (thirty to sixty-three points), with Cronbach's alpha of .87 (Jurado et al., 1998), which obtained an alpha of .940 in the study presented.

The Inventory of Suicide Orientation (King & Kowalchuk, 1994), validated in Mexico by Valdés and González (2019), is an instrument designed to measure ideas associated with suicide. It contains twenty-one items with responses on a Likert scale, and includes five categories: low self-esteem, hopelessness, inability to cope with emotions, suicidal ideation, and loneliness and despondency, with qualifying ranges of low (0 to 20), moderate (21 to 31), and high (32 to 63). Reliability was obtained from a root mean square error of approximation (RMSEA) analysis of .054, an adjusted goodness-of-fit index (AGFI) of .882, a goodness-of-fit index (GFI) of .906, a root mean square error (RMSE) of .098 and a chi-square ratio over the degrees of

freedom (CMIN) of 2.180 (Valdés & González, 2019). In the present study, Cronbach's Alpha of .898 was obtained.

The Jones (1968) irrational beliefs questionnaire, validated and adapted in the Mexican population by Olvera (2014), is an instrument that quantifies the beliefs people have, consisting of fifty items with responses on the Likert scale. It measures nine categories of irrational beliefs: need for approval ($\alpha = .693$), perfectionism ($\alpha = .824$), tendency to blame ($\alpha = .645$), external locus of control ($\alpha = .723$), concern over the future ($\alpha = .714$), avoidance of responsibilities ($\alpha = .578$), dependency ($\alpha = .680$), determinism of the past ($\alpha = .545$), and ideal solutions ($\alpha = .674$; Olvera, 2014). In the present study, Cronbach's Alpha of .851 was obtained.

Procedure

To conduct the research, a letter was sent to the academic units where the bachelor's program in psychology was being taught to request the dissemination of the battery of tests among students.

These tests was administered using a virtual form to students enrolled in the psychology degree program of a public university in Northern Mexico, with data being collected between September and October 2021. To avoid potential sources of bias, responses were not allowed to be submitted unless all the questions in the battery of tests had been answered.

Parametric statistics were used, checking for the normal distribution of data. In SPSS version 24, descriptive analyses were performed with statistics such as percentages to identify levels of depression, suicidal ideation, and irrational beliefs, as well as the Kolmogorov Smirnov statistic, symmetry, kurtosis, and effect size to identify the data distribution. Correlational analyses were undertaken of the three study variables using Pearson's bivariate correlation, as well as multiple linear regression analysis using the input method, one to predict depression and another to predict suicidal ideation based on irrational beliefs.

Based on the predictive results of both variables, the IBM Analysis of Moment Structures AMOS 18 program was used for the explanatory analysis through structural equation modeling, with the maximum likelihood estimation method. The CMIN score (χ^2/df) with a parameter of less than three for goodness-of-fit indices, GFI with a parameter greater than .900, CFI with a parameter greater than .900 and RMSEA with a parameter less than .050 (Lévy & Varela, 2006) were used.

Ethical considerations

The study was reviewed and approved on November 9, 2020 by the ethics committee of the master's program in Clinical Psychology of the participating university.

Table 1
Summary of correlation matrix between subscales and total of irrational beliefs test with BDI and ISO-21

	BDI	ISO-21
Need for approval	.397**	.454**
Perfectionism	.513**	.624**
Tendency to blame	.191**	.251**
External locus of control	.194**	.232**
Concern over the future	.373**	.385**
Avoidance of responsibilities	.440**	.547**
Dependence	.167**	.315**
Determinism of the past	.552**	.603**
Ideal solutions		
Total irrational beliefs	.581**	.697**

Note: **Correlation is significant at the .01 level (bilateral).

Each subject subsequently gave their informed consent during the administration of the battery of tests. Those who so requested were sent their results, together with a directory of clinical psychologists and psychiatrists whom they could consult in the event they required psychological care if they presented depressive symptoms or suicide orientation.

RESULTS

Three hundred and ninety-one psychology students participated in the research, of which 310 were women (79.3%) and seventy-seven men (19.7%) while four people (1%) answered other in the question on sex. The mean age of subjects was twenty, with a standard deviation of 3.58. Most subjects were enrolled in the first four semesters of the degree (65%).

A total of 34.5% scored a minimum level of depression on the BDI, 21.7% a mild level and 28.4% a moderate level, while 15.3% were classified as having severe depression. In the ISO-21, 35.8% of the population obtained a low risk level of suicide orientation, 30.2% a moderate and 34% a high risk level.

The asymmetry score was analyzed to ensure that it did not exceed two points, to perform differential procedures.

Likewise, kurtosis values ranged between .620 and -.686, which represents mesokurtic behavior and normal distribution (Hernández, Fernández, & Baptista, 2010).

The Kolmogorov-Smirnov normality test accepted the null hypothesis of the total score of irrational beliefs with a significance level of $p = .473$, perfectionism ($p = .371$), external locus of control ($p = .106$), avoidance of responsibilities ($p = .078$), and the total score of the ISO-21 ($p = .077$), showing that the data followed a normal distribution.

Conversely, the null hypotheses for all other scales and subscales were rejected by the same test, but the effect size for them was less than .20, indicating that the difference between the distribution and the data was not as large, which is why parametric tests were administered (Coe & Merino, 2003).

In the correlation analysis, coefficients were estimated between the subscales and the total score of the irrational beliefs questionnaire with the total score of the BDI and the ISO-21, using Pearson's correlation. Positive and significant correlations were observed between all the subscales and the total score of the irrational beliefs test, except for the ideal solutions subscale (Table 1). This means that the greater a person's irrational beliefs, the greater their depressive symptoms and suicidal ideation. The same is true of beliefs regarding the need for approval, perfectionism, the tendency to blame, external locus of control, concern over the future, avoidance of responsibilities, dependency, and the determinism of the past.

When the correlation measures were performed, it was possible to observe that the assumption of linear association was fulfilled between all the variables in the irrational beliefs test, except for the subscale of ideal solutions, and the total BDI score. For this reason, linear regression models were performed, finding that the total BDI score was adjusted to an equation consisting of the following predictors: determinism of the past ($\beta = .341$), avoidance of responsibilities ($\beta = .198$), perfectionism ($\beta = .181$), and concern over the future ($\beta = .106$); This model has a predictive capacity of $R^2 = .408$ (Table 2). This shows that 40% of depressive symptoms were linked to irrational beliefs that the past determines the present, avoiding responsibilities is better than facing them, perfection must be sought, and worrying dis-

Table 2
Linear regression model of BDI with total population

Model	Unstandardized coefficients		Standardized coefficients		95% CI for B		Collinearity statistics		
	B	ET	β	t	Sig.	LI	LS	T	FIV
(Constant)	-26.129	3.536		-7.390	.000	-33.081	-19.177		
Determinism of the past	1.184	.165	.341	7.160	.000	.859	1.509	.676	1.480
Perfectionism	.391	.114	.181	3.415	.001	.166	.615	.545	1.836
Avoidance of responsibilities	.559	.128	.198	4.369	.000	.308	.811	.751	1.332
Concern over the future	.350	.150	.106	2.336	.020	.055	.645	.747	1.338

Notes: R = .639; $R^2 = .408$.
 Dependent variable = Total depression (BDI).

Table 3
Linear regression model of ISO-21 with total population

Model	Unstandardized coefficients		Standardized coefficients	t	Next.	95% CI for B		Collinearity statistics	
	B	ET	β			LI	LS	T	FIV
(Constant)	-19.863	2.450		-8.106	.000	-24.681	-15.046		
Determinism of the past	1.099	.137	.332	8.052	.000	.831	1.368	.689	1.451
Perfectionism	.645	.090	.313	7.187	.000	.468	.821	.615	1.625
Avoidance of responsibilities	.677	.111	.250	6.117	.000	.459	.895	.699	1.431
External locus of control	.226	.111	.073	2.039	.042	.008	.444	.909	1.100

Notes: R = .741; R² = .549.
Dependent variable = ISO-21.

proportionately about the future. It is worth mentioning that the effect size is large (.332; Dominguez, 2017).

A linear regression was also performed for the total score of the ISO-21, which was associated with all the subscales in the irrational beliefs test, except for the ideal solutions one, since it did not meet the assumption of linear association. For the total ISO-21 score, an equation was adjusted, which consisted of the following predictors: determinism of the past ($\beta = .332$), perfectionism ($\beta = .313$), avoidance of responsibilities ($\beta = .250$) and external locus of control ($\beta = .073$, Table 3). This model has a predictive capacity of R² = .549. This shows that 54% of having suicide orientation depends on holding irrational beliefs such as the past determines the present, perfection must be sought, avoiding responsibilities is better than facing them and believing that things happen regardless of what a person does (external locus of control). It is worth mentioning that the effect size is large (.482; Dominguez, 2017).

An explanatory model of depression was subsequently built, in which it was observed that beliefs concerning perfec-

tionism, the avoidance of responsibilities, concern over the future and the determinism of the past explain the presence of depressive symptoms in 39% of subjects (Figure 1). This model shows indicators of goodness of fit with a CMIN of 1.248, GFI of .999, CFI of 1, and RMSEA of .025, indicating that the model has an excellent fit (Lévy & Varela, 2006).

Likewise, an explanatory model was created for suicide orientation (Figure 2), in which beliefs concerning perfectionism, the avoidance of responsibilities, an external locus of control and the determinism of the past explain 54% of suicide orientation. This model shows indicators of goodness of fit with a CMIN of .533, GFI of .999, CFI of 1, and RMSEA of .000, indicating that the model has an excellent fit (Lévy & Varela, 2006).

DISCUSSION AND CONCLUSION

To achieve the proposed objective, the authors sought to create one explanatory model of depression and another for

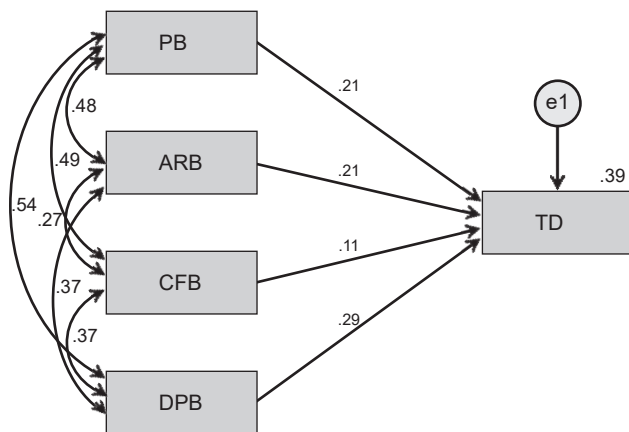


Figure 1. Explanatory model of depression caused by irrational beliefs.

Notes: PB = Perfectionism Belief; ARB = Avoidance of Responsibilities Belief; CFB = Concern over the Future Belief; DPB = Determinism of the Past Belief; TD = Total Depression.

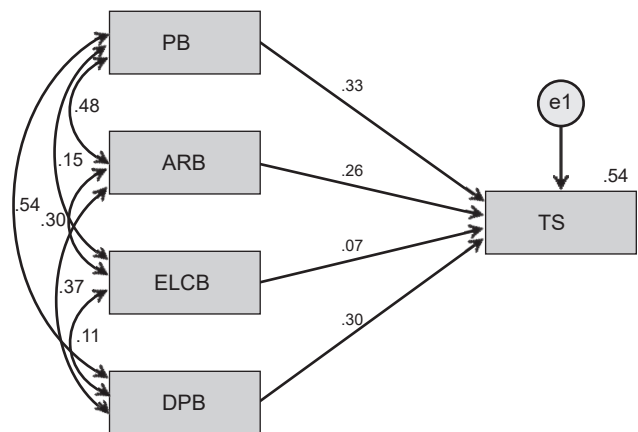


Figure 2. Explanatory model of suicide orientation due to irrational beliefs.

Notes: PB = Perfectionism Belief; ARB = Avoidance of Responsibilities Belief; ELCB = External Locus of Control Belief; DPB = Determinism of the Past Belief; TS = Total Suicide (total suicide ideation).

suicidal ideation based on irrational beliefs in psychology students. To this end, three hundred and ninety-one subjects enrolled in this degree course at a public university in the north of the country were analyzed.

A total of 43.7% of the sample studied reported moderate or high levels on the depression scale. Regarding the prevalence of suicide risk in the present research, it was found that 64.2% of the sample reported a moderate to high level of risk, which is below that reported in studies such as the one by Bahamón et al. (2015), which found a 75% risk in psychology students in Colombia.

Consistent with what has been reported in research on university students, a positive correlation was found with certain irrational beliefs and depressive symptoms (Balkis & Duru, 2020; Dudău et al., 2015; Stephenson et al., 2018). Likewise, correlations between suicidal ideation and irrational beliefs were identified, as reported in other research conducted with high school and university students (Bahamón et al., 2015; Córdova et al., 2015; Gómez et al., 2019; Quimbiulco & Castro, 2017).

In addition, the present research found that depression was predicted in 40% of subjects due to the presence of beliefs concerning the determinism of the past, avoidance of responsibilities, perfectionism, and concern over the future. In the case of the sample, 54% of suicide orientation depended on the presence of irrational beliefs concerning the determinism of the past, perfectionism, avoidance of responsibilities, and external locus of control.

In line with what was reported by Flink et al. (2017) and Zou et al. (2017) in their study of patients with psychiatric diagnoses, in psychology students, it was found that irrational beliefs have a bearing on depression and suicidal ideation.

According to what has been reviewed in the literature in relation to the explanatory model of depression (Ellis & Grieger, 1990) and suicidal behaviors (O'Connor & Kirtley, 2018), these models can contribute to an understanding of the specific irrational beliefs that may promote their presence. They also contribute to the development of specific strategies for cognitive-behavioral interventions by modifying these beliefs in therapeutic interventions in patients with depression and/or suicidal ideation.

An explanatory model of depression was created, based on beliefs concerning perfectionism, avoidance of responsibilities, concern over the future, and the determinism of the past. This model of depression coincides with the one proposed by Ellis and Grieger (1990), which mentions the presence of the belief that a person must be successful in everything they do (perfectionism). When people think they have failed, they stop trying to do something for their lives (avoidance of responsibilities), view themselves with self-defeatism, believe that the situation will always remain like this (concern over the future), and feel guilty over past events (determinism of the past).

For its part, the explanatory model of suicidal ideation is based on the beliefs of perfectionism, avoidance of responsibilities, external locus of control, and the determinism of the past, which are consistent with the volitional motivational model of O'Connor and Kirtley (2018), which notes that suicidal ideation emerges at the point when a person feels defeated because of failing to achieve social perfection (perfectionism). They therefore prefer to stop trying to avoid humiliation (avoidance of responsibilities), which, in turn, leads to pessimism. This is caused by the feeling of being trapped (external locus of control) and that they will never be able to emerge from this state (determinism of the past).

The main limitations are the size of the sample, and the fact that the subjects were only drawn from one university in one state, meaning that other populations must be included to be able to generalize the data. Likewise, since we did not work with clinical samples, it is necessary to confirm the results with people who have been diagnosed with depression or who have reported significant intentionality in regard to their suicidal ideation.

Finally, we consider that this study could be used in higher education institutions, in the areas of health sciences or social sciences, to include care strategies for depressive symptoms and the modification of irrational beliefs in the training of future professionals who will treat mental health problems.

Depression and suicidal ideation in psychology students can be predicted by irrational beliefs involving the need for approval, perfectionism, a tendency to blame, external locus of control, concern over the future, avoidance of responsibilities, dependency, and the determinism of the past.

Clinical care approaches such as REBT make it possible to modify these beliefs to reduce symptoms or create actions for mental health prevention and promotion in university students, specifically those pursuing degrees in psychology.

Funding

None.

Conflict of interest

The authors declare they have no conflicts of interest.

Acknowledgements

The authors are grateful for the support of CONACYT, since this research was developed as part of postgraduate studies, conducted with a CONACYT scholarship.

REFERENCES

- Bahamón, M., Alarcón, Y., García, C., & Trejos, A. (2015). Riesgo suicida, funcionalidad familiar y esquemas maladaptativos en jóvenes universitarios. In Y. Alarcón, F. Vásquez, W. Pineda, & Y. Martínez, (Ed.), *Estudios Actuales en Psicología (197-222)*. Barranquilla, Colombia: Universidad Simón Bolívar.

- Balkis, M., & Duru, E. (2020). Gender differences in the organizational structure of the rational/irrational beliefs in depressive symptoms. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 38(2), 272-294. doi: 10.1007/s10942-020-00343-6
- Beck, A., Steer, R. A., & Carbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review*, 8(1), 77-100. doi: 10.1016/0272-7358(88)90050-5
- Coe, R., & Merino, C. (2003). Magnitud del Efecto: Una guía para investigadores y usuarios. *Revista de Psicología*, 21(1), 145-177. doi: 10.18800/psico.200301.006
- Córdova, M., Rosales, J., & Montuñá, E. (2015). Ideación suicida en estudiantes de educación media superior: descripción con base en la aproximación dialéctico conductual. *Revista Intercontinental de Psicología y Educación*, 17(1), 79-100. Retrieved from www.redalyc.org/pdf/802/80242935005.pdf
- Dominguez, S. (2017). Magnitud del efecto en análisis de regresión. *Interacciones*, 3(1), 3-5. doi: 10.24016/2017.v3n1.46
- Dudău, D., Sfeatu, I., Funleru, C., & Dumitrache, M. (2015). Professional stress in relation to anxiety, depression, and irrational beliefs among dental and psychotherapy students. *Procedia - Social and Behavioral Sciences*, 187, 158-162. doi: 10.1016/j.sbspro.2015.03.030
- Ellis, A., & Grieger, R. (1990). *Manual de terapia racional emotiva*. España: Desclée de Brouwer.
- Flink, N., Lehto, S., Koivumaa-Honkanen, H., Viinamäki, H., Ruusunen, A., Valkonen-Korhonen, M., & Honkalampi, K. (2017). Early maladaptive schemas and suicidal ideation in depressed patients. *The European Journal of Psychiatry*, 31(3), 87-92. doi: 10.1016/j.ejpsy.2017.07.001
- Gómez, A., Núñez, C., Caballo, V., Agudelo, M., & Grisales, A. (2019). Predictores psicológicos del riesgo suicida en estudiantes universitarios. *Psicología Conductual*, 27(3), 391-413. Retrieved from www.behavioralpsycho.com/wp-content/uploads/2019/12/03.Gomez-27-3oa-1.pdf
- Hernández, R., Fernández, C., & Baptista, M. (2010). *Metodología de la investigación*. México: McGraw Hill.
- Instituto Nacional de Estadística y Geografía [INEGI]. (2021). *Estadística a propósito del día mundial para la prevención del suicidio. Datos nacionales*. INEGI. Comunicado de prensa núm. 520/21. Retrieved from www.inegi.org.mx/contenidos/saladeprensa/aproposito/2021/Suicidios2021_Nal.pdf
- Jones, R. (1968). *A factory measure of Ellis irrational belief system, with personality and maladjustment correlates*. [Tesis doctoral, Technological College Texas]. Texas Tech University Libraries. Retrieved from <https://ttu-ir.tdl.org/handle/2346/18941>
- Jurado, S., Villegas, M., Méndez, L., Rodríguez, F., Loperena, V., & Varela, R. (1998). La estandarización del inventario de depresión de Beck para los residentes de la ciudad de México. *Salud Mental*, 21(3), 26-31. Retrieved from http://www.revistasaludmental.mx/index.php/salud_mental/article/view/706/0
- King, J., & Kowalchuk, B. (1994). *ISO - 30 Adolescent: Inventory of Suicide Orientation - 30*. Minneapolis, Minnesota: NCS-Pearson.
- Lévy, J., & Varela, J. (2006). *Modelización con estructuras de covarianzas en ciencias sociales*. España: Cristina Seco.
- O'Connor, R., & Kirtley, O. (2018). The integrated motivational-volitional model of suicidal behaviour. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 373(1754), 20170268. doi: 10.1098/rstb.2017.0268
- Olvera, O. (2014). *Propiedades psicométricas del test de creencias irracionales en estudiantes de psicología de la Facultad de Estudios Superiores Zaragoza*. [Tesis de licenciatura, Universidad Nacional Autónoma de México]. Repositorio Institucional de la UNAM. Retrieved from https://repositorio.unam.mx/contenidos/propiedades-psicometricas-del-test-de-creencias-irracionales-en-estudiantes-de-psicologia-de-la-facultad-de-estudio-337470?c=Elnzpb&d=false&q=*&i=2&v=1&t=search_0&as=2
- Organización Mundial de la Salud [OMS]. (2021). *Depresión*. Retrieved from <https://www.who.int/es/news-room/fact-sheets/detail/depression>
- Quimbiulco, M., & Castro, A. (2017). *Aspectos psicosociales y creencias irracionales en pacientes con intento de suicidio atendidos en el servicio de salud mental del Hospital Carlos Andrade Marín*. [Tesis de Licenciatura, Universidad Central del Ecuador]. Repositorio digital de la Universidad Central del Ecuador. Retrieved from <http://www.dspace.uce.edu.ec/handle/25000/15257>
- Ruiz, M., Díaz, M., & Villalobos, A. (2012). *Manual de técnicas de intervención cognitivo conductuales*. Bilbao: España: Desclée de Brouwer.
- Secretaría de Salud. (2020). *Salud mental*. Retrieved from <http://data.salud.cdmx.gob.mx/portal/index.php/programas-y-acciones/309#:~:text=Poblaci%C3%B3n%20Objetivo&text=Estudios%20realizados%20por%20la%20OMS,de%20discapacidad%20a%20nive%20mundial.&text=La%20Secretaria%20de%20Salud%20Federal,adultos%20j%C3%B3venes%20en%20edad%20productiva>
- Stephenson, E., Watson, P., Chen, Z., & Morris, R. (2018). Self-compassion, self-esteem, and irrational beliefs. *Current Psychology*, 37(4), 809-815. doi: 10.1007/s12144-017-9563-2
- Turecki, G., Brent, D., Gunnell, D., O'Connor, R., Oquendo, M., Pirkis, J., & Stanley, B. (2019). Suicide and suicide risk. *Nature Reviews Disease Primers*, 5, 74. doi: 10.1038/s41572-019-0121-0
- Valdés, K., & González, J. (2019). Análisis Confirmatorio de la Escala de Orientación Suicida ISO-30 en una muestra de adolescentes de Coahuila, México. *Revista de Psicología y Ciencias del Comportamiento de la Unidad Académica de Ciencias Jurídicas y Sociales*, 10(2), 11-29. doi: 10.29059/rpcc.20191126-89
- Zou, Y., Li, H., Shi, C., Lin, Y., Zhou, H., & Zhang, J. (2017). Efficacy of psychological pain theory-based cognitive therapy in suicidal patients with major depressive disorder: A pilot study. *Psychiatry Research*, 249, 23-29. doi: 10.1016/j.psychres.2016.12.046