We are IntechOpen,
the world's leading publisher of
Open Access books
Built by scientists, for scientists

6,900
Open access books available

185,000
International authors and editors

200M
Downloads

Our authors are among the

154
Countries delivered to

TOP 1%
most cited scientists

12.2%
Contributors from top 500 universities

CLARIVATE ANALYTICS
BOOK CITATION INDEX
INDEXED

WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Risk Suicide, Anxiety, and Coping Strategies

Francisco Manuel Morales Rodríguez

Abstract

In this paper, we sought to examine the levels of suicidal risk and anxiety, as well as the coping strategies used in a sample of 154 Spanish university students, most of them first-year students, during the situation of confinement and the pandemic. After approval by the Ethics Committee, instruments for the evaluation of these constructs were administered. An ex post facto design was used. A high level of suicide risk was not found in the sample. Statistically significant differences were found in the levels of suicidal risk and anxiety according to gender, with higher scores in both variables for women. Likewise, the coping strategies of self-criticism and social withdrawal show direct associations with the levels of suicidal risk. We conclude by pointing out the relevance of the data obtained for a more effective design of psychoeducational interventions to face these public health problems with the training of effective coping strategies.

Keywords: suicidal risk levels, anxiety, coping strategies, assessment, college students

1. Introduction

Suicidal behavior has been considered a public health problem. (e.g., see [1]).

As stated in a recent article, "Etymologically, suicide (sui: "oneself"; caedere: "to kill") is the intentional act of causing one's death." ([1], p. 107).

One of the consolidated models is that of the interpersonal psychological theory of suicidal behavior [2] in which for a person to commit suicide, two elements must be present; the desire to die by suicide, having the ability to do so.

State-anxiety can be defined as an immediate and modifiable "emotional state" over time while trait-anxiety refers to a relatively more stable personality trait or tendency [3].

In the current pandemic situation, it is essential to examine the levels of anxiety and suicidal risk in university students. Especially because, as some studies have shown [4, 5], this is one of the populations that may suffer greater stress in its various manifestations due to the academic situation they have to face, the uncertainty and insecurity about the future, etc., which may increase with the educational, social and economic impact of the pandemic situation.

In a previous study [6] the level of suicidal risk was assessed by applying the same scale that has been administered in this study to a sample of 93 university nursing students, finding that depression and emotional care are significant predictors of suicidal ideation, while self-esteem and emotional intelligence

(emotional repair and clarity) are the protective factors. Previous research has also found higher scores on levels of anxiety [7] and suicidal risk [8] in women compared to men.

More recently, during the pandemic, some recent studies [9] show higher levels of stress and anxiety in women compared to men. In the same vein, other studies in different contexts found higher levels of self-perceived stress in women compared to men [10, 11].

Thus, we sought to evaluate the levels of suicidal risk and anxiety, as well as the relationships between them, and the corresponding coping strategies used.

2. Methods

2.1 Participants

The participants were 154 university students who completed the instruments to assess these constructs. For this purpose, part-time students who did not complete all the questionnaires and students from courses other than the majority were excluded. The sample was gender-balanced.

2.2 Instruments

Plutchik's Suicide Risk Scale, Plutchick (1991) [12].
It is a scale made up of 15 dichotomous items with a Yes/No response format, which evaluates the level of risk or suicidal tendency. It has adequate psychometric properties of reliability and validity. The internal consistency of the instrument was of 0.89. An example of an instrument item is: "Do you see your future in any hope?" The cut-off point in which a person being at worrying levels of suicidality is set at 6.

State–Trait Anxiety Inventory, STAI, Spielberger (1994) [13, 14]. This instrument enables the evaluation of state and trait anxiety. It consists of 40 items with Likert-type response format with 0 = Almost never and 3 = Almost always. An example of an item of this inventory is: "I feel like crying". It is a widely used instrument that has adequate psychometric properties. State anxiety presented an internal consistency of 0.93 and trait anxiety presented an internal consistency of 0.89. There are no cut points. The higher the direct score, the higher the level of anxiety.

Inventory of Coping Strategies, Tobin (1989), adapted by Cano [15]. This instrument allows the assessment of coping strategies for coping with everyday stress such as problem-solving, self-criticism, emotional expression, desiderative thinking, cognitive restructuring, social support, problem avoidance, and social withdrawal. It consists of 40 items with response format: 0: not at all; 1: a little; 2: quite; 3: a lot; 4: totally. The higher the score in an item, the higher the score in that coping strategy. This instrument has also been administered in numerous studies and shows adequate psychometric properties. Coping strategies show Cronbach's alpha ranging from 0.75 to 0.88.

2.3 Procedure

This study obtained a favorable report from the Ethics Committee in Human Sciences of the University of Granada. In this sense, anonymity, confidentiality of the data, informed consent, protection of personal data, global treatment of data without comparing between groups or persons, among other aspects, were guaranteed.

2.4 Data design and analysis

A quantitative-transversal design was used. Descriptive and bivariate analyses on the relationships of the study variables were carried out using Pearson's Correlation Coefficient.

3. Results

For the suicidal risk variable, we did not find evidence of a high level of suicide risk in this sample (*mean* = 11.02, *standard deviation* = 5.08). However, the score is higher than evaluations of previous studies in non-pandemic and confinement situations.

For state and trait anxiety, the means and standard deviations were a mean of −9.82 for state anxiety (standard deviation = 10.25) and 3.41 for trait anxiety (standard deviation = 1.97).

In regards to the gender variable, statistically significant differences were found according to gender in the levels of suicidal risk ($t = -2.31$, $p < 0.05$), and state anxiety according to gender (t = −1.96, p < 0.05). The mean score in the level of suicidal risk and anxiety was higher in women (mean suicidal risk = 4.34; mean state anxiety = 24.66) compared to men (mean suicidal risk = 2.86; mean state anxiety = 16.17).

Regarding the relationship between the variables of the study, it can be highlighted that statistically significant positive correlations were found between the levels of suicidal risk and state anxiety ($r = 0.34$, $p < 0.01$) and the level of trait anxiety (r = 0.45, p < 0.01).

Regarding the evaluation of coping strategies of daily stress and their relationship with the level of suicidal risk, the coping strategies of daily stress and self-criticism show direct associations with the levels of suicidal risk ($r = 0.31$, $p < 0.01$). Likewise, the daily stress coping strategies of desiderative thinking and social withdrawal show statistically significant positive correlations with the variable level of suicidal risk ($r = 0.21$, $p < 0.05$; r = 0.21, p < 0.05, respectively). The social support strategy shows an inverse relationship with the level of self-perceived suicidal risk ($r = -.47$, $p < 0.01$).

4. Discussion and conclusions

In this study, we evaluated the levels of suicidal risk and anxiety, as well as the coping strategies used in a sample of university students.

The results show the existence of statistically significant differences in the level of suicidal risk and state anxiety according to gender. In both cases, women have a higher mean score compared to men. This result can be considered congruent with previous studies that found higher levels of anxiety and suicidal risk in women compared to men [7, 8].

In previous research carried out by [6], lower levels of self-perceived suicidal risk were found in the sample of university students compared to our study. Hence, the pandemic situation and the confinement decreed in Spain may have possibly influenced these levels. We found higher levels of depression mood disorder in women compared to men. Depression was one of the significant predictor variables of suicidal ideation.

Regarding the relationships of the suicidal risk with the other variables in this study, positive correlations were found between the levels of self-perceived suicidal

risk and the levels of state anxiety, trait anxiety, and some of the coping strategies for coping with daily stress. Although more studies investigating university students are still needed, previous research [6] highlights the importance of coping strategies, such as those focused on social support and socio-emotional skills as evidenced in this paper.

However, this study has some limitations, for example, in our investigations, we employed self-reported measures which may have limitations of honesty, introspective ability, interpretation of questions, and response bias. In the future, more robust designs that integrate other variables are needed to establish more robust models with greater predictive capacity. It is also necessary to continue delving into possible cultural differences and their influence on the levels of risk and suicidal ideation, especially in some contexts where this topic is still taboo. Many studies that are very useful for the prevention of suicidal behavior in schools have been conducted, such as that of [16]. It would also be very interesting to analyze these variables from models based on artificial intelligence (e.g., [17]). It would be necessary to use a longitudinal design to evaluate the scores on these constructs.

5. Conclusions

The daily stress coping strategies of self-criticism, desiderative thinking, and social withdrawal demonstrate positive correlations with levels of suicidal risk. The self-perceived social support strategy also showed inverse correlations with the level of suicidal risk. Likewise, statistically significant differences were found according to gender, with higher levels of suicidal risk and anxiety found in women compared to men. The data obtained in this study are considered fundamental for the prevention of anxiety and suicidal risk levels in the current pandemic situation and the design of psychoeducational interventions for the training of productive coping strategies and socio-emotional skills.

Author details

Francisco Manuel Morales Rodríguez
University of Granada, Granada, Spain

*Address all correspondence to: fmmorales@ugr.es

IntechOpen

References

[1] Eduardo Fonseca-Pedrero E, Alicia Pérez de Albéniz, A. Evaluación de la conducta suicida en adolescentes: a propósito de la escala paykel de suicidio [evaluation of suicidal behavior in adolescents: the paykel suicide scale. *J Papeles del Psicólogo* 2020; *41*(2): 106-115. DOI:10.23923/pap.psicol2020.2928

[2] Joiner TE, Conwell Y, Fitzpatrick KK, Witte TK, Schmidt NB, Berlim MT, et al. Four studies on how past and current suicidality relate even when "everything but the kitchen sink" is covaried. *Journal of Abnormal Psychology*. 2005, *114*, 291-303.

[3] Spielberger, CD. Anxiety as an emotional state. In Spielberger, C. D. (Ed.). *Anxiety Behavior.* Academic Press; v1972, pp. 23-49.

[4] Morales Rodríguez JA, Morales Rodríguez FM. Evaluación de competencias genéricas y socioemocionales por parte de universitarios. *Eur J Child Dev Educ Psychopathol*. 2018 Dec 11;6(2):97.

[5] Morales-Rodríguez, FM. Fear, stress, resilience, and coping strategies during COVID-19 in Spanish university students. *Sustainability* 2021, *13*, 5824. DOI:10.3390/su13115824

[6] Aradilla-Herrero A, Tomás-Sábado J, Gómez-Benito J. Associations between emotional intelligence, depression and suicide risk in nursing students. *Nurse Educ Today* 2014, *34*(4):520-525. DOI:10.1016/j.nedt.2013.07.001

[7] Gao W, Ping S, Liu X. Gender differences in depression, anxiety, and stress among college students: A longitudinal study from China. *J Affect Disord*. 2020, *263*, 292-300.

[8] Becker SP, Holdaway AS, Luebbe AM. Suicidal Behaviors in college students: Frequency, sex differences, and mental health correlates including sluggish cognitive tempo. *J Adolesc Heal* 2018, *63*(2):181-188. DOI:10.1016/j.jadohealth.2018.02.013

[9] Gurvich C, Thomas N, Thomas EH, Hudaib AR, Sood L, Fabiatos K, Sutton K, Isaacs A, Arunogiri S, Sharp G, Kulkarni J. Coping styles and mental health in response to societal changes during the COVID-19 pandemic. *Int J Soc Psychiatry*. 2020 Oct 4:20764020961790. DOI:10.1177/0020764020961790.

[10] Pieh C, Budimir S, Delgadillo J, Barkham M, Fontaine JRJ, Probst T. Mental health during COVID-19 lockdown in the United Kingdom. *Psychosom Med*. 2020 Oct 1. DOI:10.1097/PSY.0000000000000871. Epub ahead of print. PMID: 33009276.

[11] Aslan, H.; Pekince, H. Nursing students' views on the COVIV-19 pandemic and their percieved stress levels. *Perspect Psychiatr Care*. 2020, 1-7. DOI:10.1111/ppc.12597

[12] Plutchik, R.; Van Praag, H. The measurement of suicidali-ty, aggressivity and impulsivity. Prog. Neuro-Psychopharmacol. *Biol. Psychiatry* 1989, *13*, 23-34.

[13] Spielberger, C.D.; State-Trait Anxiety Inventory. Corsini Encycl. Psychol. 2010. Available online: https://www.scirp.org/(S(czeh2tfqyw2orz553k1w0r45))/reference/ReferencesPapers.aspx?ReferenceID=2069438

[14] Fonseca-Pedrero, E.; Paino, M.; Sierra-Baigrie, S.; Lemos-Giráldez, S.; Muñiz, J. Propiedades Psicométricas del "Cuestionario de Ansiedad Estado-Rasgo" (STAI) en Universitarios [psychometric properties of the "state-trait anxiety questionnaire"]. *Behav.*

Psychol. Psicol. Conduct. 2012, *20*, 547-561.

[15] García, F.J.C.; Franco, L.R.; Martínez, J.G. Adaptación Española del Inventario de Estrategias de Afrontamiento. *Actas Esp. Psiquiatr*. 2007, *35*, 29-39. Available online: https://www.researchgate.net/publication/235419673_Adaptacion_Espanola_del_Inventario_de_Estrategias_de_Afrontamiento

[16] Fonseca-Pedrero E, Díez A, Pérez A, Inchausti F, Enesco A, Pérez M. Prevención del suicidio en los centros educativos. In Lucas-Molina B., Jiménez-Dasi M, editors. *Promoción de la salud a través de programas de intervención en contexto educativo*. Madrid: Pirámide; 2019. pp. 157-184.

[17] Morales-Rodríguez FM, Martínez-Ramón JP, Méndez I and Ruiz-Esteban C (2021) Stress, Coping, and Resilience Before and After COVID-19: A Predictive Model Based on Artificial Intelligence in the University Environment. *Front. Psychol*. 2021, *12*:647964. DOI:10.3389/fpsyg.2021.647964.