

PSYCHOLOGY OF EMOTIONS, MOTIVATIONS AND ACTIONS

**UNDERSTANDING THE
RISK FACTORS FOR
SUICIDAL BEHAVIOR**

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EDITOR



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Chapter 3

**TRANSDIAGNOSIS OF THE REPEATED
SUICIDE ATTEMPT:
A LONGITUDINAL STUDY**

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ABSTRACT

Introduction: Suicide is a global public health problem, with a suicide attempt being the only predictive behaviour, especially in clinical subpopulations. Classic studies have focused exclusively on transverse risk variables. This field needs transdiagnostic studies since the evaluation of risk variables has not led to hopeful results for the prevention of repeated re-use or completed suicide. *Objective:* To assess which protective variables are more predictive of a greater or lesser lethality of a previous suicide attempt, implementing a higher level of resilience to possible retries at 6 and 12 months after the first attempt. *Method:* The sample was

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comprised of 166 people who had been admitted to the emergency services due to an attempt of suicide (122–73.5% women), with ages between 18 and 76 years ($M = 36$ and $SD = 14.1$). The sample was divided into three groups, defined according to the level of lethality of the previous suicide attempt (Lethality Rating Scale-LRS). Self-efficacy, hope, optimism, impulse control, social support, and resilience were measured. *Results:* The regression analysis shows that self-efficacy (outcome expectations) ($OR = -3.23$, 95% $CI = -3.17-4.11$, $p < 0.01$), hope (future subdimension) ($OR = -6.67$, 95% $CI = -6.11-7.23$; $p < 0.01$), social support (emotional type) ($OR = -2.12$; 95% $CI = -2.02-2.98$; $p < 0.05$), and optimism ($OR = -2.31$, 95% $CI = -2.17-3.11$; $p < 0.05$) are the protective psychosocial variables in the face of the highest suicide lethality, modulating greater resilience as a result ($OR = 6.14$, 95% $CI = 6.10-7.01$; $p < 0.01$) at six months but only self-efficacy (outcome expectations) ($OR = -1.58$, 95% $CI = -1.12-2.66$, $p < 0.01$) and hope (future subdimension) ($OR = -3.22$, 95% $CI = -2.12-4.27$, $p < 0.01$) were protective factors at 12 months. *Conclusion:* Specific policies should be put in place to prevent future suicide attempts in clinical subpopulations after the first attempt, based on protection factors that measure the level of resilience, to avoid future suicide re-attempts of greater severity or lethality.

Keywords: transdiagnostic, suicide, protective factors, resilience, clinical subpopulations

INTRODUCTION

Suicide is a major public health problem in developed countries, but it has also become a health priority in low and middle-income countries [1].

The available data report that, in the world, the highest rates of death from suicides remain constant in Japan, Australia, the United States, Canada, and Europe [2] and also in South Korea, India, Russia, China, Argentina, and Brazil [3–5]. Some institutions and a large part of researchers on the subject believe that the real rates in the world are probably considerably higher than those that result from the reported cases [6, 7]. Even in countries that have developed uniform criteria for the registration of deaths due to suicide, the way in which these criteria are applied and how deaths are recorded, causes the death rates from this cause to vary considerably [8].

The latter makes it extremely difficult to compare the suicide rates of some territories with others [9]. In many countries, due to political, religious issues, cultural habits, or even other factors, such as which person was the first to find the body (the police, relatives, or others), there is a tendency to classify these deaths as external causes. Intentional (accidents), indeterminate causes, or deaths determined by health factors, in order to avoid the inconvenience of carrying out autopsies or other types of investigations that determine the real cause [6]. There is little involvement of governments in the implementation of specific prevention actions that trigger the lack of public or private systems for monitoring and controlling this behaviour, which may also increase the variability between countries or in the same country at different times [10]. In this sense, suicide rates worldwide are relative and hardly comparable, due to a profound difference in the systems of attention and prevention of suicide in each state, the form of registration of deaths as a result of this, and to the modulation of social factors, such as cultural beliefs about suicide. Cultural beliefs may include mistaken attribution of certain suicides to accidental causes, penalty in the collection of insurance, or criminalisation of suicide, all of which usually lead to a significant underreporting in its prevalence [11].

All these aspects lead us to conclude that suicide has an epigenetic and multidimensional character that makes it difficult to conceptualise, classify, and therefore, compare between countries, [12] which informs that the analysis of risk factors based on the prevalence or the comparison between rates of occurrence in various countries can scarcely help to reduce death rates from suicides. However, recently, the transdiagnostic vulnerability in suicide risk factors has been encouraging for the identification of the true etiopathogenic of suicide, although the scarce investigation of this type and the methodological disparities of the transdiagnostic aspects have hindered its development [13, 14].

Originally, classic studies on suicide have focused primarily on variables that modulate risk [15]. However, to date, little progress has been made in the ability to predict [16] or prevent suicide [17]. Previous research has been hampered by three key issues. In the first place, previous studies have focused their interest exclusively on some risk factors; mainly mental

disorders, but this aspect has scarcely helped in the accurate prediction of this behaviour [18]. Second, most studies have used cross-sectional methodologies for the analysis of risk factors and longitudinal evaluations of the actual risk of suicidal behaviour have rarely been used [19, 20]. In the third place, this phenomenon also seems to be modulated by the interaction of other variables not only risk but also protection [21, 22].

This transdiagnostic vision based on the protection factors of suicide is currently very limited, especially when it focuses on highly predictive behaviours of consummated suicide such as attempts [23]. In fact, previous attempts are the only risk factors that are predictive of more serious future attempts or that better predict the risk of completed suicide [1, 24]. However, the evaluation of these risk factors in suicide attempts, as a formula to avoid future lethal retries, has not led to hopeful results for the prevention of retention or future consummate suicide [25]. It is true that there are some interesting results about the risk factors that promote suicide attempts in specific clinical subpopulations, i.e., people who have already made previous attempts, [26] but the sociocultural modulation of this behaviour continues to make it difficult to reach generalisable results with sufficient guarantees of clinical applicability [27, 28].

In line with the above, recent studies have shown that focusing on the protective factors of suicide attempts could provide effective clues about the degree of resilience for suicidal repetition in people who have already made previous attempts [29]. In addition, studies conducted in countries with a high rate of death from suicide, demonstrate that the detection and enhancement of protective variables in the phase prior to suicide consummated as the first attempt can reduce death rates from suicide [30]. Other studies have raised the possibility that the identification of protective factors could improve the estimation of the severity of suicide to a greater extent than other classic predictors of risk, such as schizophrenia, [31] depression, [32] hopelessness, [33] or previously informed suicidal ideation [34].

Within these protective variables, it has been shown that perceived social support of an emotional nature is a powerful protector against suicide attempt [35, 36]. Specifically, greater social support in people with previous

suicide attempts can prevent subsequent suicide attempts, through the creation and maintenance of protective social structures [37]. Also, some personality variables, such as dispositional optimism [38] and impulse control [39] seem to be closely related to a suicidal attempt and its severity. In particular, some investigations that studied the factors that contributed to survival after an attempt have shown that optimism was a better predictor of suicide attempt than the number of stressful events to which participants were exposed [35, 40]. Along the same lines, various investigations have shown that impulse control is a very influential factor in the suicide attempt [41]. Thus, low impulse control determines the transition from the first idea of suicide to the attempt, and even sometimes, without there being a previous planning phase [42, 43]. It also seems that low impulse control is associated with a high level of hopelessness in people who have attempted suicide, modulating the level of severity of such behaviour [44]. Thus, it was found that hope is inversely related to hopelessness, [45] depression, [46] and suicidal ideation [47]. Hope is understood as a person's belief in changing their situation in the face of difficulties and planning alternative paths when habitual beliefs are ineffective [48]. Therefore, the scientific literature on suicide attempts has shown the importance of enhancing some protective factors to avoid the transition to more serious phases, such as the most serious re-entry or completed suicide. However, there have been few studies that have attempted to predict the impact of protective factors to modulate their influence on different levels of lethality in suicide attempts.

Hence, the first objective of this research was to check the protective influence of psychosocial variables in people who have attempted suicide, assessing the level of lethality of the attempt. In particular, people who have made more deadly attempts are expected to have less social support, optimism, impulse control, hope, and resilience than people who have made moderate or mild suicide attempts. In addition, the second objective will try to assess which protective variables are more predictive of the greater lethality of a suicide attempt at six months and 12 months after the first suicide attempt, implementing a higher level of resilience as a result.

METHODS

Participants

The sample consisted of 166 people who had made a suicide attempt: 44 men (26.5%) and 122 women (73.5%), aged between 18 and 76 years ($M = 36$ and $SD = 14.1$). Initially, 178 people showed their desire to participate, 15 of which were retracted, resulting in a final total samples size of 166 participants. All of them signed an informed consent, where the information of the study was detailed: inclusion criteria, applied tests, and objectives that were pursued, all in compliance with the Personal Data Protection Law 15/1999 of the Government of Spain. In addition, this work was previously approved by the bioethics and biosafety committee of the University belonging to the second author. Tables 1 and 2 show the socio-demographic and clinical characteristics of the sample.

Subsequently, the 166 people were divided into three groups defined according to the level of lethality of the attempted suicide. To this end, the Lethality Rating Scale-LRS scale⁴⁹ translated into Spanish by García-Nieto et al., [50] which is part of the Brief Protocol of Suicidal Behavior (item 41) with an inter-rater agreement of 88.39%. This scale examines the lethality of an attempt through the analysis of the method of suicide used. For this investigation, only the medical consequences of the attempt to classify the participants into three levels according to the scale were taken into account: Group 3 (level 0 = very slight injury), Group 2 (level 3 = moderate injury/hospitalisation), and Group 1 (level 7 = Severe ICU/operating theater/coma). Level 8 (death) of the scale was eliminated because it was not applicable in this investigation.

Measurements

The evaluation instruments used were the following:

Sociodemographic Data Sheet (Prepared Ad-Hoc for This Study)

The following data were collected from each participant: sex, age, marital status, nationality, whether he lived alone or accompanied, current work situation, previous pathology or the requirement of any prior psychological help.

The Scale of Social Support (AS-25 [51])

The objective of this scale is to quantify the availability of social support that a person has. It consists of 25 items, and a total score is obtained (minimum score 25 and maximum score 100 points). It is comprised of two sub-dimensions: emotional social support and instrumental social support. In cancer patients, it presents an internal consistency with an alpha of 0.87 and reliability of the two halves procedure (Spearman-Brown) of 0.86. Cronbach’s alpha in the current study was 0.89.

Table 1. Description of the sample according to the socio-demographic and clinical data

	n(%)	χ^2	g.l.	p	η^2 ***	Contrast power
Gender						
Women	122(73.5)	6.40	1	0.00	0.98	0.89
Men	44(26.5)					
Age						
From 18 to 27 years old	27(16.3)	9.26	5	0.83 ^{ns}	0.94	1.00
From 28 to 37 years old	44(26.5)					
From 38 to 47 years old	37(22.3)					
From 48 to 56 years old	21(12.7)					
From 57 to 66 years old	22(13.2)					
From 67 to 76 years old	15(9.00)					
Nationality						
National	92 (55.4)	12.07	2	0.02	0.78	0.88
Immigrant	63 (38.0)					
Others	11 (6.60)					
Home						
Single	58 (34.9)	5.23	3	0.34 ^{ns}	0.92	0.95
Parent/brothers	43 (25.9)					
Couple/Children	49 (29.5)					
Companions	16 (9.70)					

g.l. = degrees of freedom; *p < 0.05; **p < 0.01; ns = not significant; *** Effect size (square Eta).

Table 2. Description of the sample according to socio-demographic and clinical data

Civil status	n(%)	χ^2	g.l.	p	η^2 ***	Contrast power
Single	38(22.9)	2.98	4	0.97ns	0.51	0.10
Married	44(26.5)					
Separated/divorced	43(25.9)					
Couple of fact	24(14.5)					
Widower	17(10.2)					
Previous pathology						
Anxiety disorder	35(21.2)	17.22	6	0.01	0.93	1.00
Mood disorder	26(15.7)					
Psychotic disorder	14(8.4)					
Personality disorder	11(6.6)					
Control disorder/ additions	18(10.8)					
Physical disorder	11(6.6)					
Without previous diagnosis	51(30.7)					
Employment situation						
Unemployed	79(47.6)	1.67	1	0.47ns	0.88	.92
Occupied	87(52.4)					
Previous psychological help						
Yes	39 (23.5)	19.31	1	0.01	0.77	0.83
No	127(76.5)					
TOTAL	166					

g.l. = degrees of freedom; *p < 0.05; **p < 0.01; ns = not significant; *** Effect size (square Eta).

Vital-Revised Orientation Test (LOT-R [52])

In the Spanish version of Otero, Luengo, Romero, Gómez and Castro (1998). This scale assesses the dispositional optimism or generalised predisposition towards the expectations of positive results in a one-dimensional way. It consists of 10 items (where 1, 4, and 10 refer to optimism, 3, 7, and 9 to pessimism, and the rest are fill-in items) that are valued according to a scale of 5 points (0 = totally disagree; 4 = totally agree). A single total score is obtained where the values of the items referred to pessimism have to be inverted (3, 7, and 9) and the values of the six items corresponding to optimism and pessimism (1, 3, 4, 7, 9, and 10)). The authors of the original version report an alpha reliability coefficient of 0.87 and test-retest reliability with the non-revised version of 0.74. The Cronbach’s alpha in this study was 0.92.

Control of the Impulses (Ci) of the Big Five Personality Questionnaire [53] (Translated and Adapted to Spanish by Bermúdez-Moreno, 2001)

The complete test consists of five dimensions and a distortion scale. For this investigation, only the subdimension of Impulse Control (Ci) was used, where those aspects more related to the control of one's behaviour in situations of danger, conflict, or discomfort were measured. The different answers included are in a Likert scale of five points, where 1 corresponds to "completely false for me" and 5 "completely true for me." The Big Five Personality Questionnaire presents alpha reliability indexes between 0.73 and 0.87 [54]. In the case of the subdimension used in this study, the alpha was 0.78.

Hope Index of Herth-IEH (Herth Hope Index-HHI [48])

We used the version adapted to the Spanish population with previous suicide attempts (Hope Index of Herth-IEH) [55] of Sánchez-Teruel, Lucena-Jurado, and Cárdenas-Morales. This scale was previously translated into Spanish in the general population (Meseguer, Fernández and Soler, 2013), but its psychometric properties were not shown. This scale measures hope in adults in clinical settings through 12 items of a Likert type (1 = totally disagree up to 4 = totally agree) and in the original English version, it presents three subdimensions; temporality and future, positive disposition, and expectation and interconnection. The original study suggests that the scale has adequate psychometric properties (alpha = 0.97, test-retest = 0.91) and a three-dimensional structure following the model of hope developed by Dufault and Martocchio (1985). However, transcultural adaptations of the scale in clinical samples have shown diverse factorial structures: one-dimensional (in Italy Ripamonti et al., 2012) or two-dimensional (in Sweden Benzein and Berg, 2003, in Holland Van Gestel-Timmermans et al., 2010 in Norway by Haugan, Utvae and Moksnes, 2013). Research conducted with the HHI underscores the advantage of using this test as a global measure of hope within a clinical context [56]. The Spanish version, Índice de Esperanza de Herth-IEH, in people who have made previous suicide attempts report an alpha of 0.89 and a test-retest reliability of 0.97, and a two-dimensional structure (future and hope) that explains 53% of the

variance and presents a high inverse correlation (-0.98) with hopelessness (BHS (Beck Hopelessness Scale by Beck [57])).

The Scale of Self-Efficacy for Stress Coping-EAEAE [58]

This instrument measures the degree to which a person feels effective in order to successfully cope with stressful situations. This consists of eight items where four items (2, 4, 5, 7) evaluate expectations of effectiveness (EE) that values the belief about one's personal abilities to control stress and the remaining four items (items 1, 3, 6, 8) measure outcome expectations (ER) where belief is valued about the consequences (positive or negative) of the person's abilities to manage stress. The answers are presented in a Likert format of 1 to 5 from "completely disagree" to "completely agree." The psychometric properties of the scale in the Spanish general population are adequate ($\alpha = 0.75$, two halves = 0.79). In this study, the alpha was 0.71.

The Scale of Resilience before Suicidal Attempts (ERATS) [23]

This scale evaluates protective factors that promote a resilient outcome after a suicide attempt. It is subdivided into three subdimensions: internal protection, emotional stability, and external protection. It consists of 18 items with a Likert scale (0–4). The minimum score is 0, and the maximum score is 72, that is, the higher the score, the greater the resilience in the face of future suicide attempts. The internal consistency in people who had made previous suicide attempts had an alpha of 0.88 and their criterion validity with the Inventory of Resilience to Suicide (SRI-25) of Osman et al., [59] was 0.91, where scores below 18 points predict a future reign of suicide. In this study, Cronbach's alpha was 0.92.

Procedure

The total number of admitted persons was probed with the words "suicide attempt," "autolytic behaviour," or a "suicide attempt" in the emergency services of several hospitals in two provinces of southern Spain. The health personnel of the emergency services, previously informed by one

of the authors, offered all these people, during their admission, the possibility of participating in this investigation. After voluntary consent, the health personnel classified the patients according to the Lethality Rating Scale-LRS scale described above in the participant's section. Subsequently, the health support staff cited each participant at six months and 12 months after their first attempt to complete the assessment instruments. The application of the tests was carried out in the Emergency Service itself or in consultations provided for this purpose in the Hospitals. The completion of the full battery of tests lasted between 30 minutes and one hour.

Analysis of the Data

To analyse the existence of differences in the different variables measured between the three groups, the nonparametric Kruskal–Wallis H test was used, and the Games–Howell was used to perform the post-hoc analyses because the sample did not fulfil the normality assumptions and univariate homoscedasticity. Next, a multiple logistic regression analysis was performed to assess which protective variables (independent variables) were more predictive of the lethality level of the trial (dependent variable), finding the goodness of fit indexes in the first place. Also, multiple regression analysis was used to assess which protective factors predicted higher levels of resilience of the participants at six and 12 months after the first suicidal attempt. The level of statistical significance required in all the tests was set to a minimum of $p < 0.05$. The statistical analysis of the data was carried out using the statistical package SPSS version 23.0.

RESULTS

The results of contrast (H) and effect size (ϵ) (Tables 2.1 and 2.2) showed that there were differences between the groups in the mean scores of social support ($H(2, 165) = 10.75; p < 0.01$), self-efficacy ($H(2, 165) = 8.34; p < 0.01$), optimism ($H(2, 165) = 12.58; p < 0.01$), impulse control (H

(2, 165) = 8.55; $p < 0.01$), hope $H(2, 165) = 16.67$; $p < 0.01$), and resilience ($H(2, 165) = 29.43$; $p < 0.01$). The larger size of the contrast effect occurs in hope and resilience ($\epsilon = 0.67$; $\epsilon = 0.59$). All the post-hoc analyses detected differences between group 1 (high lethality) and the rest of groups (Group 2 = moderate lethality, Group 3 = low lethality) with a level of significance of $p < 0.01$ and with a confidence interval IC of 95%, for which the group 1 with the highest lethality had a lower level of social support, optimism, impulse control, self-efficacy, hope, and resilience than the rest of the groups. However, there was no differences between group 2 (moderate level of lethality) and group 3 (lower level of lethality) in none of the protective variables, except in hope where there were differences between these groups (Group 2 = moderate lethality; Group 3 = low lethality).

Table 3. Descriptions, significance, and differences between groups in the protective variables

	G1(AL)	G2(ML)	G3(BL)	H	ϵ	G-H	p
	M(DT)	M(DT)	M(DT)				
AS-25	71 (13.70)	84.64 (9.91)	85.09 (10.36)	10.75**	0.25	G1 < G3 G1 < G2 G2 = G3	0.001 0.001 0.990
LOT-R	16.86 (6.08)	24.77 (6.13)	24.09 (5.11)	12.58**	0.28	G1 < G3 G1 < G2 G2 = G3	0.001 0.001 0.920
Ci	28.23 (7.54)	35.41 (6.36)	36.18 (7.15)	8.55**	0.21	G1 < G3 G1 < G2 G2 = G3	0.003 0.001 0.930
EAEAE	70.14 (17.75)	89.27 (19.09)	88.23 (15.35)	8.34**	0.20	G1 < G3 G1 < G2 G2 = G3	0.002 0.003 0.979

G1 (AL) = Group 1 (high lethality); G2 (ML) = Group 2 (moderate lethality); G3 (BL) = Group 3 (low lethality); AS-25 = Scale of Social Support; LOT-R = Vital-Revised Orientation Test; Ci = Pulse control; EAEAE = Scale of Self-efficacy for the confrontation of Stress; IEH = Herth's Hope Index; ERATS = Scale of Resilience before Suicide Attempts; M = Average; DT = standard deviation; ϵ = size of the effect; H = H of Kruskal–Wallis; * $p = < 0.05$; ** $p = < 0.01$; G-H = Post hoc through Games–Howell with 95% CI.

Table 4. Descriptions, significance, and differences between groups in the protective variables

	G1(AL)	G2(ML)	G3(BL)	H	ε	G-H	p
	M(DT)	M(DT)	M(DT)				
IEH	9.78 (3.22)	12.10 (6.93)	18.45 (5.47)	16.67**	0.67	G1 < G3 G1 < G2 G2 < G3	0.001 0.001 0.002
ERATS	3.45 (3.71)	13.86 (3.37)	14.64 (5.98)	29.43**	0.59	G1 < G3 G1 < G2 G2 = G3	0.001 0.001 0.998

G1 (AL) = Group 1 (high lethality); G2 (ML) = Group 2 (moderate lethality); G3 (BL) = Group 3 (low lethality); AS-25 = Scale of Social Support; LOT-R = Vital-Revised Orientation Test; Ci = Pulse control; EAEAE = Scale of Self-efficacy for the confrontation of Stress; IEH = Herth’s Hope Index; ERATS = Scale of Resilience before Suicide Attempts; M = Average; DT = standard deviation; ε = size of the effect; H = H of Kruskal–Wallis; *p = < 0.05; **p = < 0.01; G-H = Post hoc through Games–Howell with 95% CI.

Table 5. Goodness of predictive models (6 months and 12 months)

	R	R2	R2c	ET	F
Model 1 (6 months)	0.67	0.63	0.59	2.48	73,137**
Model 2 (12 months)	0.71	0.79	0.61	1.48	124.65**

R2 = Correlation coefficient; R2c =R squared corrected; ET = typical error of estimate; F = Contrast; *p = < 0.05; **p = < 0.01.

The multiple logistic regression analysis was used to examine which protective variables predicted the degree of lethality of the suicide attempt (mild, moderate, or severe) with the reference category (severe). Preliminary analyses confirmed the fulfilment of the assumptions of non-multicollinearity (below 10, FIV = 2.3 and 7.9 [60]) and no autocorrelation in the protective variables (Durwin–Watson, D-W = 3.45) [61]. All the protective variables explain the degree of higher suicide lethality, being both models (Model 1 = 6 months and Model 2 = 12 months) significant and explaining between 0.63% and 0.79% of the dependent variable; therefore, both models raised predict the greater severity of the suicide attempt in this sample (Table 5).

Specifically, the proposed predictive models report that the variables that have a higher level of protection against the most serious suicidal lethality (Table 6) are self-efficacy (outcome) (OR = -3.23, 95% CI = -3.17–4.11; $p < 0.01$), hope (future subdimension) (OR = -6.67, 95% CI = -6.11–7.23; $p < 0.01$), social emotional support (OR = -2.12; 95% CI = -2.02–2.98; $p < 0.05$), and dispositional optimism (OR = -2.31; 95% CI = -2.17–3.11; $p < 0.05$), which in turn modulates a higher level of resilience before the suicidal attempt (OR = 6.14; 95% CI = 6.10–7.01; $p < 0.01$) six months after the first attempt. However, only self-efficacy (of result) (OR = -1.58; 95% CI = -1.12–2.66, $p < 0.01$) and hope (future subdimension) (OR = -3.22; 95% CI = -2.12–4.27; $p < 0.01$) modulate a high resilience (OR = 5.23; 95% CI = 5.10–6.11, $p < 0.01$) before the highest suicide lethality at 12 months of the first attempt.

Table 6. Predictive models (6 months and 12 months) of protective variables for the degree of suicide lethality

		B	ET	t	OR	I.C. (95%) OR	
						L.I.	U.S.
Model 1 (6 months)	EAEAE (of result)	1.02	0.21	6.73**	-3.23	-3.17	4.11
	IEH (future)	1.38	0.19	7.34**	-6.67	-6.11	7.23
	AS-25 (emotional)	1.43	0.91	6.78*	-2.12	-2.02	2.98
	LOT-R (optimism)	1.82	0.72	4.45*	-2.31	-2.17	3.11
	Ci (impulse control)	1.89	0.11	.34ns	.27	.21	5.23
	ERATS (resilience)	1.84	0.03	9.78**	6.14	6.10	7.01
Model 2 (12 months)	EAEAE (of result)	2.12	0.37	4.31**	-1.58	-1.12	2.66
	IEH (future)	1.23	0.92	6.22**	-3.22	-2.12	4.27
	AS-25 (emotional)	2.78	0.11	3.82ns	-.10	-.02	1.34
	LOT-R (optimism)	3.34	0.78	1.53ns	-.22	-.11	1.56
	Ci (impulse control)	3.12	0.91	1.56ns	.89	.19	1.32
	ERATS (resilience)	4.19	0.56	8.25**	5.23	5.10	6.11

EAEAE = Scale of Self-efficacy for the confrontation of Stress; IEH = Herth's Hope Index; AS-25 = Scale of Social Support; LOT-R = Vital-Revised Orientation Test; Ci = impulse control; ERATS = Scale of Resilience before Suicide Attempts; B = Non-standardized coefficient; ET = typical error; t = statistical contrast; * = $<.05$; ** = $<.01$; ns = not significant; OR = Odds Ratio as a result of the regression equation (Exp (β)); I.C. = Beta confidence intervals; L.I. = lower limit; L.S. = Upper limit.

CONCLUSION

This research aimed to verify the protective influence of psychosocial variables in people who have attempted suicide, assessing the level of lethality of the attempt. In particular, people who have made more deadly attempts are expected to have less social support, optimism, impulse control, hope, and resilience than people who have made moderate or mild suicide attempts. In addition, the second objective sought to assess which protective variables are more predictive of the greater lethality of a suicide attempt at six and 12 months after the first suicide attempt, implementing a higher level of resilience as a result.

Previous research on social support in people who have attempted suicide suggests that this variable is a powerful protector against this behaviour in different populations and groups [36]. The data obtained in this work support previous research, [43, 62] showing that people who have made a suicide attempt have less social support that could modulate the seriousness of the attempt, especially because they feel a sense of belonging, intimacy, comfort, listening, or encouragement (social support of an emotional type) which can probably inhibit the intention to take their life, to a greater extent than instrumental social support (prevention campaigns or institutional information). However, in most of the countries, palliative measures are not even started, such as institutionalised suicide prevention campaigns. In this regard, there are some specific practices that may be of interest, Argentina is the only country in the world that has regulated a national suicide prevention law [63] and Ireland where a measurement of the suicide attempts is conducted and not only of the consummated suicides [64]. The need to start the road towards the prevention of suicide, through local public policies and contextualised in specific territories, is considered increasingly urgent.

With regard to dispositional optimism, the results have shown that there is less optimism in people who perform more lethal attempts compared to others who said attempts were more moderate or mild. These results are in line with previous research that showed that the perception of a person's anticipation of what they think might happen could be a variable that

modulates suicidality, reporting that the type of expectations presented by optimistic people regarding their future could buffer the effects of the traumatic and stressful life events and reduce the likelihood of a suicide attempt [38]. Thus, the most optimistic people think positively about their future, which protects them against the adverse effects produced by certain life situations, by reinterpreting these situations with a lower negative value, and thus, launching coping strategies for the most difficult problems, such as being active, and less focused on negative emotions, which could lead them to a higher level of resilience.

On the other hand, it seems that the transition from ideation to suicide attempt could be determined by inadequate control of impulses [42–44]. The data obtained in this study show that this variable does not predict a higher suicide lethality. Therefore, the results obtained on the control of impulses in this research does not support the data of previous research on the modulation of this personality variable in the severity of the suicide attempt. These results could be explained by the impulse control which seems to be more of a risk variable than a protective one, exerting its negative modulatory role when it adheres to other personality variables such as impulsivity or aggressiveness.

This study supports existing research in this regard and confirms the hypothesis regarding the effect of the hope-despair continuum in suicide [65]. Despair is an emotional risk that determines the performance of a suicidal attempt, mainly because the process of despair produces a sense of loss of control over what is happening in one's life, leading a person to total helplessness, and probably increasing the need to end this situation, through a suicide attempt. What this study contributes is that hope seems to be a predictive variable that protects suicidal lethality because it helps to change their situation in the face of difficulties, planning alternative paths when habitual ones are ineffective. Hope, hence, as a possibility that future situations are more favourable, could explain the modulation of suicidal gravity, and in particular the subdimension of the future, which presents a higher level of protection against the degree of lethality of the future attempt of suicide at twelve months after the first attempt.

In this sense, self-efficacy is also seen as a protective variable of suicide [66, 67]. In particular, self-efficacy is a powerful protector against suicidal gravity at twelve months according to the results obtained from this investigation. This can be explained because the perception that a person has about the possible results (positive or negative) that could be obtained after performing specific active coping actions in the face of difficulties, is seen as an intense protector of the suicide attempt and its greater lethality or less. In addition, if we add a high level of hope for the future to these expectations, these variables would probably modulate a greater level of resilience in the future possibility of another suicide attempt, perhaps with a deadly result. What can alert us is the importance of working with hope towards the future and expectations of results as transdiagnostic protective variables that promote resilience towards adverse future situations in these clinical subpopulations, and therefore, could save lives.

Finally, the results of this study have shown that people who have made a suicide attempt with high lethality have low levels of all the protective psychosocial variables evaluated (social support, optimism, self-efficacy, impulse control, and hope) with respect to those people who have made a previous attempt of half and low suicide lethality. These results support previous studies that point out the urgent need to focus scientific interest on assessing the protective factors of suicide and not, as has been conventionally done, exclusively the risk factors [16, 34]. In addition, this new line of research could improve the understanding of completed suicide, raising the possibility of specific clinical subpopulations that, on the one hand, are insufficiently studied within suicidal vulnerability such as people who perform or have made previous attempts, and on the other hand, resilient protective factors that are more predictive of future lethal retries. Recent studies seem to support this hypothesis [68]. So much so, this study moves towards a more transdiagnostic vision of suicide, focusing the interest on people who have made a previous suicide attempt to try to understand which protective factors promote a greater degree of resilience at six and 12 months of the occurrence of this initial adverse result. Thus, this work expands on the scarce scientific literature on protective factors against

suicide attempts and uses a longitudinal methodology which is rare in studies on suicide ideation or attempt.

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