

High Suicidal Ideation and Psychosocial Variables in University Students

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Abstract

Introduction. The college students have high rates of suicidal ideation often associated with psychosocial factors. The aim of this study was to evaluate whether some of these psychosocial variables are related to the high prevalence of suicidal ideation in a College Spanish.

Method. Participants (n=40), aged between 21 and 34 years, Mean = 23.90 years and Standard Deviation = 3.003) were divided into two groups according to scores on the Inventory of Beck Suicide Ideation (SSI) (> 10 points) and, moreover, we applied various psychosocial measures.

Results. The results showed that students more likely to have suicidal ideation are less optimistic, have poorer social skills and less social support.

Conclusions. Early identification of psychosocial factors related to high ideation may help prevent dangerous situations in this collective suicide.

Keywords: university, optimism, social skills, perceived social support, suicide

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Relación entre alta ideación suicida y variables psicosociales en estudiantes universitarios

Resumen

Introducción. Los universitarios presentan unas elevadas tasas de ideación suicida asociadas a menudo con diversos factores psicosociales. El objetivo de este estudio fue evaluar si algunas de estas variables psicosociales están relacionadas con la alta prevalencia de ideación suicida en una Universidad Española.

Método. Los participantes (40), con edades entre 21 y 34 años (Media = 23,90 años y Desviación Típica = 3,003) fueron divididos en dos grupos según puntuación obtenida en el Inventario de Ideación Suicida de Beck (SSI) (>10 puntos) y, además, se les aplicó diversas medidas psicosociales.

Resultados. Los resultados mostraron que los estudiantes más propensos a presentar ideación suicida son menos optimistas, presentan menos habilidades sociales y un menor apoyo social percibido.

Conclusiones. La identificación precoz de los factores psicosociales relacionados con alta ideación puede ayudar en la prevención de situaciones de riesgo suicida en este colectivo.

Palabras Clave: universitarios, optimismo, habilidades sociales, apoyo social percibido, suicidio.

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Introduction

Worldwide, nearly one million deaths each year are due to suicide (World Health Organization-WHO, 2012a). Young people are more and more vulnerable to suicidal behaviors (WHO, 2012b, c). The latest data on Spain (Instituto Nacional de Estadística - INE, 2010) report that a total of 425 young people between the ages of 20 and 34 (349 men and 76 women) have committed suicide, representing 13.51% of the total deaths from this cause across Spain.

Among young people, one especially vulnerable group are the university students (Mackenzie et al., 2011; O'Keefe, Tucker, Wingate & Rasmussen, 2011; Storrie, Ahern & Tuckett, 2010). This aspect has been suggested in several prior investigations (Casullo, 1997; Kocmur & Dernovsek, 2003). However, quite unlike other countries (Espinoza-Gómez et al., 2010; Garlow et al., 2008; Micin & Bagladi, 2011; Skala et al., 2012), in Spain there have been few studies that assess the relation between certain variables and suicidal ideation in university students (Ruiz-Hernández, Navarro-Ruiz, Torrente & Rodríguez, 2005). Some studies (Buendía, Riquelme & Ruíz, 2004, Mansilla, 2010; Nock, 2009; Pérez-Camarero, 2009) have shown the importance of certain variables (demographic and psychosocial) as modulating risk factors or protection factors against suicide attempts or suicidal behavior in this group. In particular, regarding gender, it has been suggested that both suicidal ideation (Garlow et al., 2008; Rosales, Córdova & Ramos, 2012) and depression (Richardson-Vejlgaard, Sher, Oquendo, Lizardi & Stanley, 2009; Vázquez & Blanco, 2008) are more frequent in female university students than in their male counterparts. Similarly, low self-esteem is a good indicator of suicidal ideation in university students (Eskin, 2012; Chioqueta & Stiles, 2007; Fergusson, Beautrais & Horwood, 2003; Villalobos-Galvis, 2009). Nonetheless, studies report that low self-esteem has a stronger correlation with suicidal ideation than with actual suicide attempts (Fergusson, Woorwardy Horwood, 2000; Marciano & Kazdin, 1994; Wilbumy Smith, 2005), mainly because additional variables are required in order to modulate a step from the idea to the act itself (Fergusson et al., 2000; Orth, Trzesniewski & Robins, 2010; Rosales, Córdova & Ramos, 2012; Skala et al., 2012).

Other studies (Ellis & Rutherford, 2008; Hirsch & Conner, 2006; Hirsch, Wolford, LaLonde, Brunk & Parker-Morris, 2009) have found that a person's cognitive inferences (automatic negative thoughts or irrational ideas) about why adverse life events occur (problems related to family, finances, academics or relationships) are a modulating variable in suicidal ideation. The results of these studies report that university students that present optimistic explanatory styles buffer the effects of traumatic or stressful life events, reducing their level of suicidal ideation; while those who present pessimistic explanatory styles enlarge the impact of such events and contribute to the increase of suicidal thoughts and behaviors.

In this context, dispositional optimism refers to stable, generalized expectations that positive things will occur in life (Scheier & Carver, 1985). Dispositional optimism is usually associated with low reports of ill health, less frequent physical symptoms and more optimal coping with stress (Martínez-Correa, Reyes del Paso, García-León & González, 2006; Schou, Ruland, Sandvich & Karesen, 2004). Thus, recent studies (Conversano et al., 2010; Manderscheid et al., 2010) have shown that dispositional optimism is a protective aspect against suicide, modulating less frequent suicidal ideas and attempts.

On the other hand, it seems that in university students, a powerful protector against suicidal ideation and behavior (McLean, Maxwell, Platt & Harris, 2008; Meadows, Kaslow, Thompson & Jurkovic, 2005; Nakagawa et al., 2009) is perceived social support, on the level of emotions (Hirsch & Barton, 2011; Pulgar-Buendía, 2010), and coming from adaptive social structures (Martínez-González, Inglés, Piqueras & Ramos, 2010), that is, from friends and family members with no history of emotional disorders or prior suicide attempts (Maimon & Kuhl, 2008; Winfrey Jiang, 2010). There is a direct positive effect that protects against a future suicide attempt when the university student perceives that he or she has friends and family that promote positive attitudes (in listening, affection and support), above all during the first phases of suicidal ideation (Wilcox et al., 2012).

In the university context, the new situations and relationships that the student encounters make social skills (Harris, 1995) and prosocial behavior (Eisenberg, Fabes, & Spinrad, 2006) key elements in this period of life, in order to attain adequate

psychosocial adjustment (Hansen, Nangle & Meyer, 1998; Inglés, Martínez-González, García-Fernández, Torregrosa & Ruiz-Esteban, 2012). Some authors pose (Durkheim, 1897; 2003; Yang & Clum, 1994) that skill deficits shown in social situations seem to be good predictors of suicide attempts. In university students, a high level of social skill (Benedek, 2006; Downs & Eisenberg, 2012) promotes broad social support networks, producing a prompt call for help in the early phases of suicide gestation, either stopping the progression from the idea to actual planning, or minimizing the fatality of first attempts (Kleiman & Riskind, 2012).

Therefore, the objective of the present study is to assess the existence of suicidal ideation in university students and to verify what psychosocial factors (optimism, self-esteem, social support, social skills and attributional styles) are associated with high suicide ideation in this group.

Method

Participants

All participants (N=40) were recruited from the students enrolled in a subject from the School Psychology degree at a Spanish university (see procedure). A prerequisite for participating in the sample was to have no history of prior suicide attempts, since this would indicate that the participant had already passed to another phase of this behavior. The specific groups and their characteristics are given below:

- 1) Group 1 without suicidal ideation (N= 21; 7 men and 14 women), between the ages of 21 and 33 (M = 24.05; SD = 2.765).
- 2) Group 2 with high suicidal ideation (N= 19 persons; 5 men and 14 women), between the ages of 21 and 34 (M = 23.74; SD = 3.314).

Instruments

Socio-demographic data sheet (created for this investigation). Here each student recorded the following data: age, sex, marital status (single, married, separated/divorced or widowed), employment status (unemployed or employed).

The Beck Scale for Suicide Ideation (Beck et al., 1979), adapted to Spanish by Comeche, Díaz and Vallejo (1995). This scale quantifies suicidal intentionality through assessing thoughts or ideas of self-elimination. The scale contains 19 items in its original version and 21 items in the Spanish version. For each item there are three alternative responses that are graded in intensity, from 0 to 2, indicating a growing degree of severity and/or intensity of suicidal intentionality. The sum of these indicates the severity of suicidal ideas. The cutoff point (Beck et al. 1979) is a score of 10 or more points, indicating that there is risk of suicide, as revealed by high suicidal ideation. A number of studies (Beck et al., 1979; Ranieri et al., 1987) detected a Cronbach alpha reliability between .83 & .89, and high construct validity (.97).

The *Escala de Apoyo Social* (AS-25) [Social Support Scale] by Pulgar-Buendía (2010). The objective of this scale is to quantify a person's available social support. It contains 25 items that produce a total score ranging from 25 to 100 points. Internal consistency of the scale presents a Cronbach alpha coefficient of .87 and split-half reliability presents a Spearman-Brown coefficient of .86.

The *Life Orientation Test – LOT-R* (Scheier, Carver & Bridges, 1994), in a Spanish version from Otero, Luengo, Romero, Gómez and Castro (1998). It contains 10 items that are rated on a 5 point scale. This scale assesses Dispositional Optimism as a single dimension. The authors report reliability with a Cronbach alpha coefficient of .87 and a test-retest reliability of .74.

The *Self-Esteem Scale* by Rosenberg (1965, 1979), adapted to a Spanish population by Vázquez, Jiménez and Vázquez (2004). This is one of the scales that provide an overall assessment of self-esteem. It includes 10 items, with content focusing on feelings of respect and acceptance of oneself. Each of the items is answered on a four-point scale. The total score ranges from 10 to 40 points. According to the authors of the Spanish translation, Cronbach alpha reliability is .74 and construct validity is .87.

The *Escala de Habilidades Sociales* (EHS) [Social Skills Scale] by Gismero (2000). The scale is composed of 6 subscales or factors with a total of 33 items. The person must select one of the 4 alternatives offered. A higher global score indicates that

the person has more social skills in different contexts. Cronbach alpha for the complete scale is .88 (Gismero, 2000).

The *Attributional Style Questionnaire (ASQ)* from Peterson, Matousek, Mednick, Volavka and Pollock (1982), translated and adapted to a Spanish population by Segura (1983). A person's attributional style is assessed using this questionnaire (Weiner, 1985). This self-applied questionnaire contains 48 situations, where the subject chooses the alternative that he or she normally uses, from two possible alternatives. The questionnaire is divided into 3 subscales of 16 items each. The subscales are: Stability-Instability, Internality-Externality and Globality-Specificity. For this investigation, the direct global score of the scale was used. Internal consistency as measured by the Cronbach alpha for each of the dimensions ranges between .72 and .75, and the test presents criterion validity between .19 and .41 (Peterson et al., 1982).

Procedure

Voluntary participation was solicited, during the month of March 2010, from 93 students in the School Psychology degree program at a Spanish university. All the students had a prior undergraduate degree in Elementary Education. The students were called together outside of normal class hours to complete the psychological tests in a university classroom. Included with the assessment booklets was an informed consent (Faden, Beauchamp & King, 1986) and the socio-demographic data sheet. Of the 93 total students enrolled in this subject, 63 students actually arrived at the time and place indicated for taking the tests. Three booklets were eliminated, two of them due to incomplete responses or lack of demographic data (sex, age, etc.) and one that specified that the student had made a suicide attempt in the past. All students who had obtained a score of 10 points or higher on the *Scale for Suicide Ideation* (Beck et al., 1979) were selected (20 total), as well as another 20 students with similar socio-demographic characteristics to the former group but who had scored lower than 10 on this scale. Thus, the final sample consisted of 40 persons. The students who had scores of lower than 10 points on the *Scale for Suicide Ideation* (Beck et al., 1979) were called Group 1, while Group 2 was composed of the university students who had obtained a score of 10 points or higher on this scale. The order of test application was counterbalanced, using a Latin square design for incomplete counterbalancing (Arnau, Anguera & Gómez, 1990; Buela-Casal, Caballo & Sierra, 1996), with the exception of the informed consent and

the socio-demographic data sheet, which were administered first and second, respectively. The tests were applied in a group session.

Results

Student's *t* analysis was used to analyze for any differences between the two groups in the different variables measured. In those cases that did not meet assumptions of normality and homoscedasticity, the non-parametric Mann-Whitney U test was used. The level of statistical significance required on all tests was $p < 0.05$. Statistical analyses were carried out using SPSS version 19.0.

In order to measure the effect of extraneous variables (gender, age, marital status, etc.), the likelihood ratio was calculated between the given variables and the group variable. Data analysis revealed that the groups are homogeneous in all variables: Gender ($LR_{(1)} = .235$; $p = .628$); age ($F_{1,40} = .104$; $p = .748$), employment situation ($LR_{(1)} = .405$; $p = .524$), and marital status ($LR_{(2)} = .374$; $p = .829$).

Results (Table 1) referring to the level of *social support* showed that there are significant differences between the groups in the mean scores on this variable ($t_{40} = 10.500$; $p < .001$), with a greater level of support in those participants who do not have suicidal ideas as compared to those that have such ideas. Similarly, there are significant differences between the groups in terms of their level of *optimism* ($t_{40} = 14.361$; $p < .001$), showing a lower level of dispositional optimism in the group with suicidal ideas as compared to the group that does not present suicidal ideas. A significant difference was also obtained in level of *self-esteem* ($U = 14.500$; $p < .001$), and in level of *social skills* ($t_{40} = 9.783$; $p < .001$), where greater levels of *self-esteem* and of *social skills* were found in students without suicidal ideas than in those who have ideas of suicide. See Table 1.

Table 1. Descriptive values and level of significance of psychological variables by groups

Test (variable)	group 1 (without suicidal ideation)		group 2 (with ideation)		T_{40}	$p < .05$
	Mean	SD	Mean	SD		
AS-25 (social support)	87.86	15.48	26.74	7.78	10.50	.00*
LOT-R (optimism)	33.95	5.67	13.11	2.92	14.36	.00*
S-ES (self-esteem)	41.76	10.39	14.37	2.91	14.50	.00**
EHS (social skills)	89.29	22.27	27.53	16.96	9.78	.00*
ASQ (attributional style)	1.10	4.85	.26	3.36	.62	.53

* Student t (t_{40} ; $p < .01$) ** Non-parametric Mann-Whitney U ($p < .01$)

Discussion

The existence of suicidal ideation in university students was explored, for the purpose of verifying what psycho-social factors (*optimism, attributional style, self-esteem, social support* and *social skills*) confer greater suicidal vulnerability associated with the early phases of this behavior.

As in prior research (Espinoza-Gómez et al., 2010; Garlow et al., 2008; González-Forteza, García, Medina-Mora & Sánchez, 1998; Sanz, Navarro & Vázquez, 2003; Vázquez & Blanco, 2006), the results indicated that suicidal ideation presents a high prevalence (33.3% of the total) in the university students in this study. Furthermore, students with high suicidal ideation score significantly lower in *self-esteem, social skills, social support* and *dispositional optimism* than do students with low suicidal ideation, in line with other research studies (Córdova, Rosales, Caballero & Rosales, 2007; Eskin, 2012; Villalobos-Galvis, 2009; Skala et al., 2012).

In this regard, the fact that responsibility for one's acts is increasingly required and valued culturally (Farabaugh et al., 2012; Vázquez & Blanco, 2008), in particular academic success (Rosales, Córdova & Ramos, 2012; Inglés et al., 2009; Villalobos-Galvis, 2009), it may be that self-esteem and optimism in university students take on an important value in predicting suicidal ideas, since a failure (or the anticipation thereof) in any area of life will directly affect the image they have of themselves, thereby diminishing their self-worth and making the presence of suicidal ideas more likely. As other authors have suggested (Arria et al., 2009), we consider it essential to launch early psychological interventions, developing programs to encourage optimism and to focus

on one's own abilities, as a formula for coping with small failures as a prior step to attaining academic success in the university context.

As in prior studies (Joiner et al., 2009; McLean et al., 2008; Nakagawa et al., 2009; Walker, Wingate, Obasi & Joiner, 2008), our results that show greater levels of perceived emotional support in those students without suicidal ideas, demonstrate the importance of adaptive social networks (Brougham, Zail, Mendoza & Miller, 2009; Luxton, June & Fairall, 2012; Martínez-González et al. 2010; Matlin, Molock & Tebes, 2011) as effective tools for promoting health in this group. One interpretation of this finding would be that students with greater levels of perceived social support put more adequate social skills into practice, thereby creating closer emotional ties with classmates and friends. These social networks would act as effective warning alarms, especially in the early phases of suicidal behavior (ideation). Campus healthcare services should initiate and reinforce institutional instruments where the members of alternative social networks would be reflected as key social support for university students at risk, or who have a history of psychological disturbance. Carrying out sensitization campaigns for early detection of mental health problems among university students could eliminate the social stigmatization associated with asking for help in the early phases of discomfort and could promote social support networks directed by the university associations themselves, or through online institutional tools on campus.

Limitations and future prospects

In the first place, the sample is very small and is composed exclusively of students in School Psychology, so it may not be possible to generalize the results either to other students of School Psychology or to university students in other degree programs. It would be useful to assess suicidal ideation in larger samples, including students from other university degree programs, as well as to perform another type of analysis (e.g., logistical regression analysis). Secondly, the sample is heavily female, which may have increased the probability of higher levels of suicidal ideation (González-Forteza et al., 1998; Rosales, Córdova & Ramos, 2012; Sánchez, Cáceres & Gómez, 2002). Even though it is true that there is always a large majority of women in Humanities and Educational Sciences (including School Psychology), future researchers should gather sufficient data to obtain similar sized samples when comparing risk factors for suicide between groups of university students. Finally, it

should be stated that there are other pertinent risk factors for assessing suicidal ideation that have not been examined in this study. Future research should consider factors relating to socio-economics, family, culture, education and epigenetics, which many studies have already shown to be associated with suicidal ideation and risk (Amitai & Apter, 2012; Brent & Melhem, 2008; International Association for Suicide Prevention-IASP, 2010; Joe, Canetto & Romer, 2008; Joiner, 2006; United National Development Program-UNDP, 2009; Sánchez-Teruel, 2012; Wasserman, Terenius, Wasserman & Sokolowski, 2010; WHO, 2012 a, b, c).

In particular, further studies on suicidal ideation in university students should include early screening for anxiety (state-trait), for depression and hopelessness, also personality assessment, and assessment of any previous adverse events (having a family member that is ill, suffering from a chronic illness, a history of psychological disorders, etc.). And as other authors affirm (Bausela, 2005), Spanish universities need a more homogeneous psychological assessment and treatment service, with nationwide coverage, and led by full-time practicing psychologists. In this way, these professionals could implement on-campus prevention, assessment and treatment programs free of charge to university students.

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