



SCIENTIFIC ARTICLE

Attachment patterns and suicidal behaviours on higher education students

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KEYWORDS

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Abstract

Introduction: Every individual has a necessity to establish affective relationships throughout life in order to feel comfort and support. This need is called attachment and allows the human being to explore the world, acquiring knowledge about himself and everyone else.¹

There are several changes that occur on students' lives when enrolling and attending university, a period that is known to include a set of situational and academic transitions which might lead to mental health problems, and thus making students more vulnerable and more prone to develop suicidal behaviours.

Objectives: To determine the prevalence of suicidal ideation on higher education students and to assess its relationship with attachment patterns.

Methods: Quantitative, descriptive and correlational study, applied on a sample of 1074 students from a Portuguese higher education institution. Data collection was possible through an online platform that included a survey with questions regarding sociodemographical and academic profiling, the Portuguese version of the Adult Attachment Scale (EVA)² and the Suicidal Ideation Questionnaire.³

Results: Students' age varies between the 17 and 49 (\bar{x} = 23.9 years old \pm 6.107 Sd), the vast majority (64.7%) are females. Results show that the presence/severity of suicidal thoughts is low (\bar{x} = 13.84; \pm 20.29 Sd) on a scale from 0 to 180 and cut-off point > 41 for values that suggest potential suicidal risk, and based on that, 84 students were identified (7.8%). We verified significant relationships between suicidal ideation and anxiety and attachment (r = 0.314; P = .000).

Conclusions: Although there is not a high prevalence of suicidal ideation on students, we found 84 students in our sample (7.8%) that reveal a potential risk for suicide. The results also show that young students with safe attachment patterns display less suicidal ideation. Safe attachment patterns are essential on interpersonal and social relationships and play an important role during the academic period.

We cannot be indifferent towards this issue due to its individual, familiar and social repercussions. Every higher education institution should then establish student support offices and develop mental health promotion programs as well as suicide prevention campaigns.

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Introduction

Over the last decades, research on developmental and health psychology has shown that attachment is present throughout life and might be a promoting factor of mental health.⁴

Although attachment behaviours are more visible during childhood, they remain throughout life. Attachment with parents is important on the young's psychosocial adaptation to new life contexts. According to Canavarro² the criteria for definition of attachment behaviour during childhood are also applicable on adult relationships (peers, teachers, family and friends).

Attachment patterns are essential on interpersonal relationships and play an important role during academic education. A good adaptation to university is positively associated with both the number and quality of relationships with peers. As relationships progress, there is an improvement on the students' academic performance, their social and personal-emotional adjustment, as well as their attachment to the institution.⁵

Regarding anxious attachment, states that it is a result of adverse experiences, leading to a closer proximity to the attachment figure. In this sense, parents are a sort of attachment backup, to whom the teen resorts to on the more vulnerable circumstances.⁴

Peter refer that teenagers who display depressive or anxious symptoms tend to manifest a negative attachment pattern towards their parents.⁶ The same authors also highlight that attachment patterns that implicate negative stimuli are associated with higher levels of suicidal ideation. Gonçalves' study^{7,8} also suggests that secure attachment patterns and an adequate family bond work as protectors of suicidal behaviours in young people.

Secondarily, Brausch and Gutierrez⁹ and Ben-Ari¹⁰ show that, in comparison with individuals who display evasive or anxious-ambivalent attachment, students with secure attachment build and maintain a broader social support network in case of sudden significant changes in their life, as well as financial or emotional issues.^{9,10}

It was also verified by existing literature¹¹ that individuals with a concerned attachment style tend to search for safety in others (while fearing rejection) and display more negative affection. Other studies, show that young people with insecure attachment patterns are associated with interpersonal problems and psychological issues like depression, anxiety, borderline personality disorder and posttraumatic stress disorder as well as many other disorders that, individually, already represent a risk factor for suicidal behaviours.¹²

Portuguese version of Adult Attachment Scale

Although there is no actual agreement regarding the number of types of adult attachment, the majority of authors propose the existence of only one secure type, and several insecure.

According to Canavarro⁶ in order to properly assess adult attachment in an efficient fashion, the Adult Attachment Scale-R (AAS-R) was elaborated by Collins & Read (revised in 1990). A scale items analysis was executed, which revealed

the existence of three dimensions: *Close*, assessing if the individual feels comfortable establishing intimate and close relationships; *Depend*, assessing the way individuals feel under situations where they depend upon other people; *Anxiety*, assessing the degree of concern with the possibility of abandonment or rejection by others.

By using this scale it is possible to assess the relationship between these three dimensions. A strong connection between *Depend* and *Close* suggests a person with trust in other people, feeling comfortable when there is emotional proximity. On the other hand there is a weak link between *Anxiety* and *Depend*.

The Portuguese version of Adult Attachment Scale (Collins & Read 1990), translated and adapted by Canavarro, Dias and Lima,² is composed by 18 items that allow the study of the predominant attachment types established by the subjects, being equally distributed through three dimensions or factors, whose designation is due to the original scale authors.

The first dimension, designated *Anxiety* is composed by items 3, 4, 9, 10, 11 and 15, and it is characterized by the degree of anxiety experienced by the individual. It regards interpersonal questions such as fear of abandonment or not being desired - "*I often worry about the possibility of not being truly loved by my partners*". There is a parallelism between this dimension and the anxious attachment style, whereby a higher score in this dimension translates in a more anxious attachment pattern.

Trust in others comprises items 1, 6, 8*, 12, 13* and 14, and corresponds to the degree of trust deposited on those around the subject, as well as the trust in their availability when needed, as is an example "*I establish relationships easily*". This dimension has its equivalent on the avoiding attachment type, that is to say that a low score in this dimension translates in a more avoiding attachment pattern (Canavarro et al., 2006).

Comfort with proximity includes items 2*, 5, 7*, 16*, 17* and 18* being characterized by the subject's degree of comfort with intimacy. As an example "*I have difficulty in feeling dependent of others*." In this dimension there is a connection with the secure attachment pattern, which means that a high score here suggests a secure attachment pattern.

The answer to the Portuguese version of the AAS is given on a 5-point Likert scale that ranges from "nothing characteristic of me" (1) and "extremely characteristic of me" (5). The final result of each subscale is obtained by the sum of its items, which can vary from 6 to 30, taking into account that the aforementioned items with an asterisk (*) (2, 7, 8, 13, 16, 17 and 18) are considered in a reverse fashion, since the sentences are reversed. After the sum, the final score must be divided by the number of items of each subscale.

The results are analysed in a way that, for each subject, the highest score among all three dimensions will characterise their attachment style.

By our study's perspective we seek to assess the way students bond with adults, which means it is in our interest to analyse the way all three dimensions coexist on the same subject. That being said, the scale allows the classification of individuals according to the attachment prototypes proposed by Bartholomew cited in Canavarro:² Secure, Concerned, Disconnected, and Frightened. The author considers

the possibility of non classifiable situations, attachment patterns that do not fit in any of the categories mentioned above. The classification obeys the following terms:

- *Secure*: Individuals that display a score of more than 3 points on Comfort with proximity and trust in others, while scoring less than the average 3 on the anxiety variable;
- *Concerned*: This group includes individuals that present scores above 3 in all of the three variables (comfort with proximity, trust in others and anxiety);
- *Disconnected*: Individuals that score less than 3 on all the variables;
- *Frightened*: On this group we include any individual that scores less than 3 on comfort with proximity and on trust with others, while scoring more than 3 on anxiety.

Regarding the reliability indicators for the Portuguese AAS subscales and total scale, Canavarro et al. (2006) obtained alpha Cronbach values of 0.84 for Anxiety 0.67 for Comfort with proximity and 0.54 for Trust in others, with an overall alpha of 0.81, a Spearman-Brown coefficient of 0.84 and a split-half coefficient of 0.83.

Considering the reliability and validity results, and according to the authors, the Portuguese AAS seems to present psychometric characteristics that allow and encourage its usage in both scientific and clinical investigation.

Psychometric study of the Portuguese version of AAS (EVA)

The reliability study for this scale was performed using only the alpha Cronbach for each subscale.

For the *Anxiety* subscale statistical data reveal average indexes lower than expected, with a minimum index on item 4 “*Other people do not get as close as I would like to*” (mean = 2.09 ± 0.99) and a maximum on item 10 “*When I show my feelings, I’m afraid others don’t feel the same way about me*” (mean = 2.69 ± 1.15). However, the item that best represents this subscale is item 11 “*I often ask myself if my partners really care about me*” with a correlational value of 0.783 and a variance of 62.5%. The item with less variability (32.0%) figuring as the most problematic is item 4 with a correlation value of 0.55. Alpha Cronbach values of the different items can be considered good, since they oscillate between 0.838 and 0.876 with an overall value ($\alpha = 0.877$).

In *Trust in others* the average indexes of all items are higher than expected, with the exception of item 6 “*I don’t care about people getting closer*” which value is 2.86 with standard deviation of 1.02, while also registering the less variability (12.1%) and lower correlational value ($r = 0.214$). The highest variability (29.5%) is obtained on item 8 “*I feel somehow uncomfortable when I get closer to people*” with a correlational value of 0.394, and the highest correlational value is observed on item 14 “*I know I can count on people when needed*” ($r = 0.420$) with a variability of 24.1%. Regarding the alpha Cronbach coefficients we can state they are reasonable oscillating between 0.549 on item 1 “*I establish relationships easily*” and 0.640 on item 6 “*I don’t care about people getting closer.*”

Last but not least, in *Comfort with proximity* the less representative item, and thus potentially more problematic, is

item 5 “*I feel well depending on other people*” revealing an average index of 1.71 ± 0.88 sd with a negative correlation towards the rest, and inferior to 0.20 and in our judgment should be removed from the scale. The remaining items are well centered, since the average indexes observed are slightly higher than expected. Among all the items, the one that best describes the subscale is item 18 “*I’m not sure I can count on people when I need them*” ($r = 0.546$), with a variability of 47.5%. Alpha values range from 0.364 on item 18 and 0.647 on item 5. This leads us to classify somewhere between weak and reasonable, considering the overall subscale value 0.545, slightly inferior to that of the original scale.

On Table 2 we present the correlation matrix between the different subscales and their overall value. The first conclusion is that anxiety establishes a negative and significant connection with the other two subscales which allows us to state that lower indexes of anxiety correspond to higher comfort with proximity and trust in others, with variabilities of 15.21% and 31.24% respectively. Between trust in others and proximity, the connection is positive and significant, that is to say higher trust in others induces higher proximity, with a variance of 17.55%.

The correlation between the subscales’ score and overall score indicates that comfort with proximity is the best in clarifying adult attachment, by explaining almost 30.0% of overall value’s variance.

Results

We assessed adult attachment among three dimensions: a) *Anxiety* - degree of anxiety that the individual experiences towards interpersonal matters such as fear of abandonment or acceptance/rejection; b) *Contact with proximity* - degree on which the individual feels comfortable with proximity and intimacy; c) *Trust in others* - degree of trust and availability of others, when needed.

We then sought to know if gender was associated with attachment. Through the mean values we verify that male students display more comfort with proximity and female students show higher indexes of anxiety and trust in others, but without statistical significance between groups.

In regards to age, we verify that anxiety is higher on younger students, and this age group also displays less comfort with proximity. Students aged 22 to 25 have the highest levels of comfort and trust in others. The results of attachment and year of attendance. As it is shown, anxiety is higher on first year students and comfort and trust higher on fourth year ones.

Finally, focusing on the results regarding attachment and academic performance, we notice that students who did not fail years tend to have less anxiety and higher comfort and trust. Assuming variance equality only for trust in others, we find that t value is not explanatory for all three dimensions of attachment.

Considering the data obtained it is possible to classify the students according to the attachment prototypes proposed by Bartholomew (1990, cited in Canavarro et al, 2003). Thus, we found Secure attachment pattern students on more than half of the total sample (64.2%), on males (65.4%), on females (63.6%). “Concerned” make up 11.5%,

Table 1 Correlational values and alfa Cronbach for each subscale of adult attachment scale

Item	Mean	Sd	R/item	R2	Alpha
<i>Anxiety</i>					
3 I often worry about the possibility of not being truly loved by my partners	2.74	1.11	0.692	0.497	0.854
4 Other people do not get as close as I would like to	2.09	0.99	0.550	0.320	0.876
9 I often worry with the possibility of being left by my partners	2.35	1.12	0.690	0.510	0.854
10 When I show my feelings, I'm afraid others don't feel the same way about me	2.69	1.15	0.746	0.580	0.844
11 I often ask myself if my partners really care about me	2.48	1.16	0.783	0.625	0.838
15 I want to be close to people but I'm afraid of getting hurt	2.37	1.15	0.629	0.421	0.865
<i>Trust in others</i>					
1 I establish relationships easily	3.32	1.00	0.440	0.220	0.549
6 I don't care about people getting closer	2.86	1.02	0.214	0.121	0.640
8 I feel somehow uncomfortable when I get closer to people	4.08	0.93	0.394	0.295	0.570
12 I feel good when I interact closely with someone	3.62	0.89	0.392	0.199	0.572
13 I get upset when someone gets emotionally close to me	3.85	0.98	0.304	0.194	0.604
14 I know I can count on people when needed	3.52	1.01	0.420	0.241	0.557
<i>Comfort with proximity</i>					
2 I have difficulty in feeling dependent of others	3.13	1.10	0.186	0.059	0.550
5 I feel well depending on other people	1.71	0.88	-0.119	0.082	0.647
7 I believe people are never present when needed	4.01	0.93	0.417	0.347	0.444
16 I think it is difficult to trust completely on other people	3.03	1.18	0.454	0.252	0.406
17 My partners often wish I'm closer than I feel comfortable with	3.80	1.03	0.290	0.191	0.498
18 I'm not sure I can count on people when I need them	3.80	1.06	0.546	0.445	0.364

Table 2 Pearson's correlation matrix between subscales and overall values of AAS

Subscales	Anxiety	Comfort with proximity	Trust in others
Comfort with proximity	-0.390*	-	
Trust in others	-0.559*	0.419*	-
Total attachment	0.383*	0.548*	0.376*

* $P > .001$.

where 11.9% are female and 10.6% male. With less percentages we have "Disconnected" (6.3%), "Frightened" (9.9%) and "non classifiable" (8.1%).

Relationship between attachment pattern and suicidal ideation risk

Table 4 shows that the correlation of suicidal ideation with the subscales of attachment pattern vary from ($r = -0.277$) in *comfort with proximity* and ($r = -0.428$) in *attachment anxiety*. For the different dimensions of attachment there is an inverse correlation with comfort with proximity and trust in others, and a direct correlation for anxiety, with statistical significance. This allows us to state that with higher anxiety levels and less comfort and trust, there is a higher suicidal ideation risk.

Every dimension of attachment revealed to be predictor of suicidal ideation risk, as shown by the results on Table 5. On a more detailed analysis, we can state that anxiety was the first variable to enter the regression model, explaining 18.3% of suicidal risk variation with a standard error of regression of 18.346. On a second step, trust in others, and

Table 3 Classification of attachment prototypes in function of gender

Gender classificação	Male		Female		Total		Residuals	
	N	%	N	%	N	%	Male	Female
Secure	248	65.4	442	63.6	690	64.2	0.6	-0.6
Concerned	40	10.6	83	11.9	123	11.5	-0.7	0.7
Disconnected	26	6.9	42	6.0	68	6.3	0.5	-0.5
Frightened	34	9.0	72	10.4	106	9.9	-0.7	0.7
Non classifiable	31	8.2	56	8.1	87	8.1	0.1	-0.1
Total	379	100.0	695	100.0	1074	100.0		

Table 4 Pearson correlations between attachment pattern and suicidal ideation

Factors	r	P
Anxiety	0.428	.000
Comfort with proximity	-0.277	.000
Trust in others	-0.353	.000

together with anxiety they explain 20.2% of variability. Finally on the third step, comfort with proximity was consigned as predictor.

The correlation that these variables establish with suicide risk is rather reasonable ($r = 0.458$), and explains 21.0% of variation, with a standard error value of 18.066. The *Variance Inflation Factor* indicates that these model’s variables are non collinear.

Standard beta coefficients show that *anxiety* is the variable with the most predicting value, followed by *trust in others* and *comfort with proximity*, which allows us to infer that suicidal ideation risk is lower with lower anxiety and higher comfort and trust values.

Standard coefficients for the attachment patterns and suicidal ideation risk are represented in Figure 1. We notice that the *attachment anxiety* coefficient is ($\beta = 0.31$), *trust in others* ($\beta = -0.14$), and *comfort with proximity* ($\beta = -0.10$). This model explains roughly 21.0% of suicidal ideation variability. Between *comfort with proximity* and *attachment anxiety*, and *trust in others* and *attachment anxiety*, the correlations are negative and reasonable, which allows us to state that higher levels of anxiety correspond to less trust in others and less comfort with proximity. In regards to *comfort with proximity* and *trust in others*, this relationship is positive, which means that higher trust in others translates higher comfort with proximity.

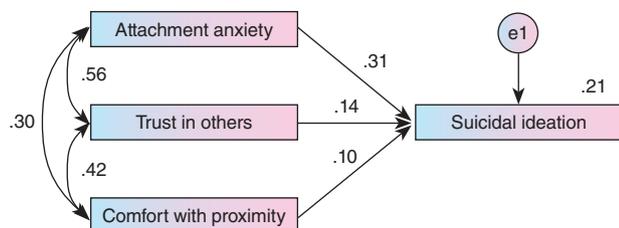


Figure 1 Adjusted model for suicidal ideation regarding attachment patterns.

Through the mean values we verify that male students display higher comfort with proximity and female students show higher levels of anxiety and trust in others (Table 5), without statistical significance between groups. Students with secure attachment pattern scored higher than 3 on the comfort and proximity variables of the AAS, while scoring less than 3 on anxiety.

Discussion

The majority of the students in our sample (64.2%) have safe attachment patterns and suicidal ideation on this group is rather low (2.9%). Students with insecure attachment patterns –Frightened (26.4%); Concerned (16,3%)– are the ones who display higher suicidal ideation, and thus a higher suicide risk. We also verify through AAS that students with higher levels of anxiety, less comfort with proximity and trust in others have more suicidal ideation, which allows the consideration of these variables as predictors of suicidal risk.

Suicidal ideation prevalence on the sample is 7.8%, results that are slightly inferior to those registered by other samples of higher education students. Several authors^{13,14} studies found prevalence values of 11.09% and 11.1% respectively. In Portugal, on a study performed with students from Universidade da Beira Interior, 10% of students displayed suicidal ideation on the month prior to the participation on the survey.¹⁵ Pereira, with a study on students from Universidade de Trás-os-Montes e Alto Douro (UTAD), also found values around 10.7% regarding the week prior to the questionnaire.¹⁶

Suicidal behaviours on higher education students might be associated with a very diverse set of factors, such as low self-concept, weak social support and a higher amount of stressful events. By analysing the literature on attachment, we verify that other studies tend to withdraw similar conclusions to those of our research, which indicate that there is less risk for suicidal ideation with higher levels of comfort with proximity and trust in others, and lower levels of anxiety.

Gonçalves verified that subjects with insecure attachment patterns displayed more depressive states, higher severity of suicidal ideation, and therefore a higher risk for suicide.¹⁷ We found a positive association between insecure attachment styles and suicidal ideation, as well as a negative correlation with secure attachment.

Practical implications

Suicide on young people is a complex phenomenon with multifactorial etiology. The results show that there is a set

Table 5 Mean difference between AAS and gender

AAS dimension	Male		Female		t	P
	Mean	Sd	Mean	Sd		
Anxiety	2.394	0.850	2.486	0.892	-1.639	.102
Comfort with proximity	3.554	0.600	3.537	0.565	0.451	.652
Trust in others	3.242	0.581	3.248	0.572	-0.182	.857

of psychosocial, demographic, academic, clinical and behavioural variables that connect with suicidal ideation and display a predicting value.

The data obtained allowed the biopsychosocial profiling of the student with risk for suicide: female, age 18/19 and insecure attachment pattern.

Suicidal ideation reached worrisome levels on 7.8% of the sample. If we consider school as a place for formation, health and well-being, then higher education institutions must develop efforts in order to create psychosocial support offices, as well as programs that target mental health promotion and suicide prevention.

What we know about the theme

- Recent scientific evidences state suicide as a complex phenomenon with multifactorial etiology (biologic, psychologic, socio-cultural factors).
- Students' suicidal behaviours seem to be rising significantly, representing a high vulnerability group
- A secure attachment pattern can be protective of suicide behaviours.

What we get out the study

- This study provides relevant information about the role of attachment patterns as moderators of suicide behaviours in young students.
- The obtained data can be used for signalling and guidance of students at risk, but also to establish interventional strategies that promote mental health and prevent suicidal behaviours on academic environments.

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Conflicts of interests

The authors declare that there are no conflicts of interests.

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