

**ASSOCIATION BETWEEN IMPULSIVITY AND SUICIDAL IDEATION AMONG
COLLEGE STUDENTS****ASSOCIAÇÃO ENTRE IMPULSIVIDADE E IDEAÇÃO SUICIDA EM
ESTUDANTES UNIVERSITÁRIOS****ASSOCIACIÓN ENTRE IMPULSIVIDAD E IDEACION SUICIDA EN
ESTUDIANTES UNIVERSITARIOS**

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ABSTRACT

Objective: To evaluate the association between impulsivity and suicidal ideation among college students. **Method:** Cross-sectional study, participants included in the study were 567 students from a public university. The Barratt Impulsiveness Scale was used for impulsivity assessment and a questionnaire for sociodemographic description and measurement of suicidal ideation in the last 30 days. Possible associations were verified by the Pearson's chi-square test (or Fisher's Exact test, when appropriate), were adopted an interval of 95% and significance level of 5%. **Results:** The prevalence of suicidal ideation was 9.7%, was more prevalent among women and subjects between 18-24 years old; as for the impulsivity level, 65,96% of the participants are within normal limits. There was a significant association between impulsivity levels and suicidal ideation; students classified into "highly impulsive" or "extremely over-controlled" groups were more likely to present suicidal thoughts. **Conclusions:** These findings corroborate the results of other studies and reinforce the need of expanding this topic discussion into universities and the implementation of preventive strategies.

Descriptors: Suicide; Suicidal Ideation; Impulsive Behavior, Students; Universities.

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RESUMO

Objetivo: avaliar a associação entre impulsividade e ideação suicida em estudantes universitários. **Método:** estudo transversal com 567 estudantes de uma universidade pública. Utilizou-se a Escala de Impulsividade de Barratt para avaliação da impulsividade; questionário para caracterização sociodemográfica e aferição de ideação suicida nos últimos 30 dias. As associações foram verificadas pelo teste qui-quadrado de Pearson e exato de Fisher, com nível de significância de 5% e intervalo de confiança de 95%. Utilizou-se o programa SPSS 17.0. **Resultados:** a prevalência de ideação suicida foi 9,7%, estando mais presente entre mulheres e sujeitos entre 18 e 24 anos; 65,96% encontravam-se dentro dos limites normais de impulsividade. Houve associação significativa entre impulsividade e ideação suicida, sendo os grupos de universitários “altamente impulsivos” e “muito controlados” os mais expostos. **Conclusão:** a maioria dos estudantes manteve-se dentro dos padrões normais de impulsividade, contudo os discentes altamente impulsivos e muito controlados apresentaram associação significativa com presença da ideação suicida.

Descritores: Suicídio; Ideação Suicida; Comportamento Impulsivo; Estudantes; Universidades.

RESUMEN

Objetivos: Evaluar la asociación entre impulsividad e ideación suicida en estudiantes universitarios. **Método:** Estudio transversal con 567 estudiantes de una universidad pública. Se utilizó la Escala de Impulsividad de Barratt para evaluar la impulsividad y un cuestionario para caracterización sociodemográfica y evaluación de ideación suicida en los últimos 30 días. Las asociaciones se verificaron por medio de la prueba chi-cuadrado de Pearson y la prueba exacta de Fisher, se consideró un nivel de significación del 5% y un intervalo de confianza del 95%. **Resultados:** La prevalencia de ideación suicida fue de 9,7%, predominó más en mujeres e individuos entre 18 y 24 años; el 65,96% estaba dentro de los límites normales de impulsividad. Hubo una asociación significativa entre la impulsividad y la idea suicida, los grupos universitarios "altamente impulsivos" y "muy controlados" son los más expuestos. **Conclusión:** La mayoría de los estudiantes permaneció dentro de los patrones normales de impulsividad, sin embargo, los estudiantes altamente impulsivos y los muy controlados mostraron una asociación significativa con la presencia de ideación suicida.

Descriptores: Suicidio; Ideación Suicida; Comportamiento Impulsivo; Estudiantes; Universidades.

INTRODUCTION

Suicide is currently a serious public health problem which affects, on different levels of intensity, populations in all regions of the globe and different age groups.¹ Data from the World Health Organization (WHO) estimate that more than 800 thousand people commit suicide annually being this the second cause of

death among the population aged from 15 to 29 years, preceded only by deaths caused by traffic accidents.²

As a complex phenomenon, suicide is the final act of a multifaceted and multidimensional problem which also includes other components such as suicidal ideation and suicide attempts, constituting the so-called suicidal behavior.³ Suicidal ideation (which shows different levels of

thinking about taking the own life away, accompanied or not by planning) is a significant predictor of suicide and / or its attempts²⁻³, especially for the population of adolescents and young adults, whose prevalence of thoughts about ending the own life away have been increased worryingly in the recent years.^{2,4}

Among this population, epidemiological evidences have pointed out that some subgroups, such as university students, are exposed to a greater risk of presenting suicidal ideation.⁵⁻⁸ Admission to higher education, in general, occurs in a phase of life between 18 and 24 years, commonly marked by significant social changes.⁵ During this period, the university student, beyond having to deal with the new demands and pressures of adult life, must adapt himself to the peculiar challenges and demands of academic life and building new social bonds in that environment. These changes are challenging and present high stressogenic potential and if the student does not fit in them, it could result in a psychological distress that, combined with other factors, may contribute to the genesis of suicidal thoughts.^{3,8}

Suicidal ideation is a subjective behavior associated to a myriad of underlying causes which are complex to understand and measure and can vary among different population and age groups. Among university students,

although scarce, studies have been carried out aiming to identify the prevalence of suicidal ideation, as well as its associated factors.⁵⁻⁸

In this sense, evidences have shown that different behavioral and subjective aspects are related to suicidal behavior^{5, 8-10}, and impulsivity stands out among them.⁹⁻¹⁰ On a polysemic concept, in general, impulsivity can be understood as a quick and unplanned reaction adopted without assessing all its potential implications and possible consequences, focusing only on immediate responses and not on the long-term ones.¹⁰ Impulsive behavior impacts negatively several facets of human life with the potential to generate mental illness, psychological distress and damage to life quality.⁹⁻¹¹ Among university students, impulsivity has been identified as a factor associated to suicidal ideation in this population.¹⁰⁻¹¹

In the national context, there are few studies evaluating the risks of suicidal behavior among university students and, even rarer, investigations about the association between impulsivity and suicidal ideation in this population, which reinforces the need to examine how these phenomena impact on the graduate student life. Thus, the present research aims to evaluate the association between impulsivity and suicidal ideation in university students.

It is noteworthy that the study is part of a matrix project entitled “Suicidal ideation and associated factors in university students”¹² and its main objective was to evaluate the association between impulsivity and the presence of suicidal ideation on a sample of students from a public federal university, given that, to understand this associative dynamics, and enable a better understanding of the events, allows us to draw a situational diagnosis and the implementation of preventive measures, evidence-based, by the higher education institutions in the country.

METHODS

An analytical, cross-sectional study was carried out among university students from the Federal University of Mato Grosso (UFMT), campus Cuiabá-MT. The sample for this study was composed of 567 undergraduate students 18 years aged or older and who adequately answered the instruments for collecting this investigation. It is worth pointing out that the total sample in the matrix study was estimated in 714 undergraduate students, considering a 95% confidence level, a 50% proportion and a sample of error of 3.5%. For this analysis, 147 forms which have showed inconsistencies, like blank answers or did not allow the correct assessment on impulsivity and / or suicidal ideation were

disregarded. It was adopted a probabilistic sampling method in clusters (groups as sample units) and stratified (by subject areas) looking for having a sample which could adequately represents the entire population study. From the 373 classes offered during the study period, 46 were randomly selected through MINITAB program.

Data collection took place between April and May 2015 and it was performed by previously trained applicators. There was distribution of instruments in classrooms, which were self-administered and answered by the subjects of the research, without the teacher’s presence and after a brief explanation about the research objectives. The instruments, after been filled, were returned to ballot boxes which were placed in front of the classrooms.

In order to characterize the sample, a closed instrument was used and built by the main researcher of the matrix study, composed of socio-demographic and economic variables. The prevalence of suicidal ideation was assessed through the dichotomous question "In the past 30 days, did you think about killing yourself?", and the respondent was able to choose between “yes” or “no”. It is worth mentioning that this same questioning was used in previous studies that evaluated suicidal ideation in samples of university students.

The evaluation of the impulsivity variable was performed by the Barratt Impulsiveness Scale (BIS-11), translated and validated for using in our context.¹³ It is a self-administered instrument, composed of 30 items related to the manifestations of impulsivity and divided into regarding to the context, which is, a tendency to act without premeditation; attentional impulsivity, related to quick making decision, which is about the fact the individual has a tendency to reduce the attention sustained in a target stimulus by meddling with thoughts, which can lead to a behavior out of the context, due to difficulties in sustaining attention; and impulsiveness, due to the lack of planning, which includes behaviors oriented to the present without thinking about the consequences of long-term making decision.¹³

Each study participant has analyzed each item considering its own behavior and has classified it according to a four-point Likert scale, ranging from 1 (rarely or never) to 4 (almost always / always). The general score of the scale varies from 30 to 120 points, and individuals with score <52 being classified as very controlled, scores from 52 to 71 points classified as within normal limits of impulsivity and scores ≥ 72 considered as highly impulsive.¹³

In addition to a global score, BIS-11 allows the calculation of partial scores

regarded to its three subdomains of impulsivity: motor (items 2, 3, 4, 16, 17, 19, 21, 22, 23, 25 and 30), attentional (items 6, 5, 9, 11, 20, 24, 26, 28) and for not planning (items 1, 7, 8, 10, 12, 13, 14, 15, 18, 27, 29).¹³

The data had been entered to the *Microsoft Office Excel for Windows*® program, with double entry, aiming at the subsequent pairing through the EpiInfo version 7.0 resources. This procedure ensured the identification of possible inconsistencies between typing and correction before the analytical step. After the individual analysis of the variables study, using elements from basic descriptive statistics, the results obtained were treated in an associative way, through the *Statistical Package for the Social Sciences* (SPSS) program, version 17.0, verifying which sociodemographic, economic and impulsivity elements were associated in a statistically significant way. with suicidal ideation. The associations had been verified by the test qui-square of Pearson (or Fisher's exact test when appropriate), adopting a significance level of 5% and confidence interval (CI) of 95%.

The matrix research was submitted to analysis by the UFMT Research Ethics Committee in compliance with the ethical principles determined¹³ by Resolution No. 510 of April 2016 from the National Health Council (CNS), being approved

under decision No. 1.021.217. At the time of collection, participants were informed about the right to refuse to participate and all procedures to guarantee confidentiality, anonymity, privacy and non-maleficence which were adopted.¹⁴

RESULTS

The sample of university students was characterized by the predominance of female individuals (52.7%), and the age of

the group from 18 to 24 years (68.9%), brown ethnicity (42.3%), who did not work (62.2%) and with impulsivity classified within the normal age limits, according to BIS-11 (65.96%). Regarding to the prevalence of suicidal ideation among university students, from the 567 validated questionnaires, 9.7% of them reported ideation in the last 30 days (Table 1).

Table 1 – Sociodemographic characterization, impulsivity and suicide ideation among university students UFMT. Cuiabá, MT, Brazil, 2015.

Variables	n (567)	(%)	95% CI
Age			
18 to 24 years	391	68.96	(65.03; 72.63)
25 to 32 years	91	16.05	(13.26; 19.30)
32 years or more	85	14.99	(12.29; 18.16)
Gender			
Female	299	52.73	(48.62; 56.81)
Male	268	47.27	(43.19; 51.38)
Ethnicity			
Black	91	16.05	(13.26; 19.30)
Brown	240	42.33	(38.33; 46.43)
White	236	41.62	(37.63; 45.72)
Professional situation			
Works	214	37.74	(33.85; 41.80)
Does not work	353	62.26	(58.20; 66.15)
Lives alone			
Yes	89	15.70	(12.93; 18.92)
No	478	84.30	(81.08; 87.07)
Impulsivity			
Very controlled	114	20.11	(17.01; 23.60)
Normal	374	65.96	(61.97; 69.74)
Highly Impulsive	79	13.93	(11.32; 17.03)
Suicidal ideation in the last thirty days?			
Yes	55	9.70	(7.53; 12.41)
No	512	90.30	(87.59; 92.47)

Source: prepared by authors. Note CI = Confidence Interval.

Despite the data have been not presented, however have been evidenced in the study, it has been demonstrated that the individuals who presented suicidal ideation were mostly female (63.64%), were

between 18 and 24 years old (74.55%), were from white ethnicity (50.91%), did not work at the time of data collection (67.27%) and, most of them did not live alone (78.18%).

The Table 2 shows the overall and subdomains of impulsivity scores, evaluated by BIS-11. An average total score of the items on the scale of 60.38 points is observed, consistent with impulsivity indicators considered

normal. The average values for the subdomains were, respectively, 19.10 points (motor impulsivity), 17.10 points (attentional impulsivity) and 24.19 points (impulsivity due to lack of planning).

Table 2 - Barrat BIS 11 impulsivity scale - general score and subdomains of university students at UFMT. Cuiabá, MT, Brazil, 2015.

BIS 11 - Subdomains	Mean (SD)	Min – Max
Motor	19.10 ± 4.058	11,000 - 35,000
Attention	17.10 ± 4.153	8,000 - 31,000
Lack of planning	24.19 ± 4.594	12,000 - 39,000
General	60.38 ± 10.612	34,000 - 105,000

Source: prepared by authors Note. SD = Standard Deviation.

Table 3 shows the association of sociodemographic variables of university students at UFMT with the presence of suicidal ideation. Regarding to the impulsiveness, it is evident that suicidal

ideation was significantly associated among the categorized as highly controlled and the highly impulsive ($p < 0.001$), respectively.

Table 3 - Association among demographic, social and impulsivity variables, with the presence of suicidal ideation in the last 30 days among university students at UFMT. Cuiabá, Mato Grosso State, Brazil, 2015.

Variables	Suicidal Ideation				p-value
	Yes		No		
	N	(%)	N	(%)	
Age					
18 to 24 years	41	(10,49)	350	(89,51)	.346
25 to 31 years	10	(10,99)	81	(89,01)	.650
32 years or more	4	(4,71)	81	(95,29)	-
Gender					
Female	35	(11,71)	264	(88,29)	.088
Male	20	(7,46)	248	(92,54)	-
Ethnicity					
Black	9	(9,89)	82	(90,11)	.947
Brown	18	(7,50)	222	(92,50)	.129
White	28	(11,86)	208	(88,14)	-
Professional situation					
Works	18	(8,41)	196	(91,59)	.419
Doesn't work	37	(10,48)	316	(89,52)	-
Lives alone					
Yes	12	(13,48)	77	(86,52)	.189
No	43	(9,00)	435	(91,00)	-
Impulsivity					
Very controlled	2	(1,75)	112	(98,25)	<.001 ^{EF}
Highly impulsive	20	(25,32)	59	(74,68)	<.001
Normal	33	(8,82)	341	(91,18)	-

Source: Prepared by the author Note. FE = Fischer Exact

DISCUSSION

This study was aimed to assess the association between impulsivity and the presence of suicidal ideation in students at the Federal University of Mato Grosso - Campus Cuiabá, in which the evidenced characteristics are similar to the results which were found in previous investigations on suicidal ideation in the same population, highlighting the prevalence in females⁷, in the age of the group between 18 to 24 years

old, from white ethnicity¹⁵, unemployed¹⁶ and who did not live alone.⁷

The prevalence which was found in this study for suicidal ideation is similar to that obtained in studies with university students from other countries. One of them, which was carried out in a higher education institution in Portugal (n = 1,074), had showed a prevalence of suicidal ideation of 7.8%⁷; another, carried out among 5,245 students in China, had found 9.1% of students with suicidal thoughts.¹⁷

It is emphasized here the lack of information about the presence of ideation in young Brazilian university students, a fact that has made comparisons difficult among this population segment. In Brazil, a study carried out among university students (n = 637), in Natal city – RN, and João Pessoa city - PB in the period from 2007 to 2008, it was found alarming indicators of the prevalence of suicidal ideation in their samples (52.45%).⁵ More recently, a study that investigated factors associated with suicidal ideation among health university students (n = 142) it was found that 22% of students had suicidal thoughts.⁸

It's noteworthy the high prevalence of suicidal ideation which were obtained through a Brazilian's study^{5,8}, which were considered discrepant in relation to the results of studies conducted with other youngsters, as well as from the present study. However, such differences may have occurred due to regional diversities, differences among the population group and also, due to the methods and instruments used for. Another possibility may concern to the different sample sizes used in studies with this population.¹⁷

Regarding to impulsivity, 65.96% of university students were found within normal limits and 13.93% were considered as highly impulsive. Such findings are in line with the study carried out with

university students in southern Brazil (n = 129), with a prevalence of 69% for normal limits and 31% for highly impulsive individuals.¹⁰

Impulsivity is a predisposition to rapid and unplanned reactions from internal or external stimuli which negative results which may come are not taken into consideration.^{9,10} Its increase can lead to aggressive, violent, unplanned behavior, associated to the perception of threat or immediate frustration, negative emotions such as fear and anger, and characterized by high levels of activation of the autonomic nervous system. Impulsive or reactive aggression can be considered as a normal and desirable reaction to environmental threats. However, it can be pathological when its intensity is disproportionate or directed at the wrong target, causing negative consequences.^{9-11,24}

As much as there is not a consensus among researchers related to its definition, and although there are different concepts, the common point among the authors refers to its multidimensionality.¹⁸ Thus, its evaluation can be done through instruments which investigate specific areas and domains, such as the Barratt Impulsiveness Scale, which has been widely described in the literature as one of the best measures of self-relate established for impulsivity.¹³

With the use of this instrument, in the present study, the findings were classified

into domains: motor, attentional and lack of planning, and the results were found slightly inferior if compared to the study carried out with university students in Southern Brazil, in which, averages were found as 23.87 for the motor score, as 22.43 for the attentional and as 30.5 for the lack of planning.¹⁸ In both studies, the highest values were obtained in the domain lack of planning.

Some hypotheses suggest that people who are unable to use their emotional past and motivational experiences to guide current decisions, have higher impulsiveness scores for lack of planning.¹⁸ If the lack of planning involves behaviors at the present without thinking about the long-term consequences, the identification of the presence of suicidal ideation in these impulsive individuals is essential, since they can evolve from ideation to thoughtless action, it means, suicide attempt, culminating in death.¹⁰

The association which was found in the present study between impulsivity and suicidal ideation, was also demonstrated in other studies, such as the one developed among 258 university students in Colombia, which has identified a significant association ($p < 0.001$) between the variables.⁶ In Portugal, a survey among 1,074 university students aiming to assess suicidal ideation and its relationship with some psychosocial variables also has

proved a statistical association between suicidal ideation and impulsivity ($p < 0.001$), stating that the lower the impulsivity, the lower the risk of suicidal ideation.⁷

A control-case study, conducted in China, analyzed 392 cases of suicide in a population aged from 15 to 34 years, with the aim of exploring the effects of impulsivity on Chinese suicides and what role it plays in the relationship between negative events of life and the suicidal behavior. The results pointed to impulsivity as an important predictor of suicides in that population.¹⁹ In this perspective, it has been considered that impulsivity has emerged as a promising risk marker for suicide.

Impulsivity when associated to the presence of suicidal ideation, would make the individual more likely to commit suicide. Suicidal behavior, in general, crosses linearly and continuously the stages of ideation, planning, attempts and suicide, allowing the investigation of suicidal thoughts to be an early opportunity for intervention and prevention.^{1,3} However, this classic sequence of behaviors may not be applied to impulsive individuals, who can take their own lives out without planning and / or long periods of ideation.

It is noteworthy that the association obtained from the present study between high impulsivity and suicidal ideation, is in line with the literature, as discussed

previously. However, the association between highly controlled students regarding impulsivity and ideation, needs to be further investigated, considering that this finding has not been described in other studies among university students. It is worth noting that for the other variables which were investigated, no significant association was observed.

Once the literature produced on this theme is still incipient in Brazil, one of the limitations of this study refers to the difficulty of comparing the findings with similar populations, which would make possible hypotheses looking for the development of new studies to decrease the scientific gap. Another aspect refers to the cross-sectional design of the study, which doesn't allow stablishing cause-end-effect relationships. However, the findings suggest that such aspects can be incorporated to the development of preventive measures in higher education institutions which should offer programs to promote mental health in academic settings and environments.

CONCLUSION

In this study, it was found that the prevalence of suicidal ideation among university students is similar to those described in international studies, but it was considerably lower than the only study

taken in Brazil with this kind of population. Regarding to impulsivity, most groups and individuals remained within normal standards, however, the highly impulsive and very controlled students showed a significant association with the presence of suicidal ideation, which should be deeply investigated in further researches.

The data obtained contribute to the production of knowledge on the subject in a substantial way due to the scarcity of available information. Thus, despite the limitations imposed by the kind of study (cross-sectional) and the absence of studies which investigate the same object, making it difficult to compare the data, the described findings may contribute substantially to the advancement on the knowledge, updating professional backgrounds and other people linked to the mental health area, as well as stablishing repercussions on expanding the discussion about the theme and consequently improving assistance to the population involved.

REFERENCES

1. Teixeira SMO, Souza LEC, Viana LMM. O suicídio como questão de saúde pública. Rev Bras Promoç Saúde [Internet]. 2018 [citado em 10 dez 2019]; 31(3):1-3. doi: <http://dx.doi.org/10.5020/18061230.2018.8565>. Disponível em: <https://periodicos.unifor.br/RBPS/article/view/8565>

2. World Health Organization. Preventing suicide: a global imperative. Geneva: WHO; 2014.
3. Botega NJ. Crise suicida: avaliação e manejo. Porto Alegre: Artmed; 2015.
4. Faure MI, Urquidí C, Bustamante F, Florenzano R, Ampuero K, Terán L et al. Asociación entre la calidad de vida relacionada con la salud y riesgo suicida en adolescentes: estudio transversal. *Rev Chil Pediatr.* [Internet]. 2018 [citado em 28 out 2018]; 89(3):318-24. Disponível em: <https://www.scielo.cl/pdf/rcp/v89n3/0370-4106-rcp-00103.pdf>. doi: <http://dx.doi.org/10.4067/S0370-41062018005000103>
5. Dutra E. Suicídio de universitários: o vazio existencial de jovens na contemporaneidade. *Estud Pesqui Psicol.* [Internet]. 2012 [citado em 05 out 2018]; 12(3):924-37. Disponível em: <https://www.e-publicacoes.uerj.br/index.php/revispsi/article/view/8229/5986>. doi: <https://doi.org/10.12957/epp.2012.8229>
6. Siabato Macías, Salamanca Camargo Y. Factores asociados a ideación suicida em universitários. *Psychol Av Discip.* [Internet]. 2015 [citado em 05 out 2018]; 9(1):71-81. Disponível em: <https://revistas.usb.edu.co/index.php/Psychologia/article/view/994/733>. doi: <https://doi.org/10.21500/19002386.994>
7. Gonçalves AM, Sequeira CAC, Duarte JC, Freitas PP de. Suicidal ideation on higher education students: influence of some psychosocial variables. *Arch Psychiatr Nurs.* [Internet]. 2016 [citado em 17 out 2018]; 30(2):162-66. doi: <https://doi.org/10.1016/j.apnu.2015.08.005>
8. Veloso LUP, Lima CLS, Sales JCS, Monteiro CFS, Gonçalves MAS, Silva Júnior FJG. Ideação suicida em universitários da área da saúde: prevalência e fatores associados. *Rev Gaúch Enferm.* [Internet]. 2019 [citado em 10 jan 2020]; 40:e20180144. Disponível em: <https://www.scielo.br/j/rgenf/a/JttXRNsGZJGqtG3b4NnBZHS/?lang=pt>. doi: <https://doi.org/10.1590/1983-1447.2019.20180144>
9. Hadzic A, Spangenberg L, Hallensleben N, Forkmann T, Rath D, Straub A, et al. The association of trait-impulsivity and suicidal ideation and its fluctuation in the context of the Interpersonal Theory of Suicide. *Compr Psychiatry* [Internet]. 2019 [citado em 10 jan 2020]; 98:152158. Disponível em: <https://www.sciencedirect.com/science/article/pii/S0010440X19300811>. doi: <https://doi.org/10.1016/j.comppsy.2019.152158>
10. Parcias SR, Sombrio LS, Flügel NT, Rosario MJP do, Souza MC, Guimarães ACA. Comportamento impulsivo: estudo em uma população de universitários. *Rev Atenção Saude* [Internet]. 2014 [citado em 24 out 2018]; 12(42):36-41. Disponível em: https://seer.uscs.edu.br/index.php/revista_ciencias_saude/article/view/2176/1654.... doi: 10.13037/rbcs.vol12n42.2176
11. Loftis MA, Michael T, Luke C. College student suicide risk: the relationship between alexithymia, impulsivity, and internal locus of control. *Int J Educ Psychol.* [Internet]. 2019 [citado em 10 jan 2020]; 8(3):246-69. Disponível em: <https://hipatiapress.com/hpjournals/index.php/ijep/article/view/3991>. doi: <https://doi.org/10.17583/ijep.2019.3991>
12. Santos HGB, Marcon SR, Espinosa MM, Baptista MN, Paulo PMC. Fatores associados à presença de ideação suicida entre universitários. *Rev Latinoam Enferm.* [Internet]. 2017 [citado em 23 out 2018]; 25:e2878. Disponível em: <https://www.scielo.br/j/rlae/a/PhmjVpP5Z86X8vkHgCdqz9D/?lang=pt&format=pdf>. doi: <https://doi.org/10.1590/1518-8345.1592.2878>
13. Malloy-Diniz LF, Mattos P, Leite WB, Abreu N, Coutinho G, de Paula JJ et al. Translation and cultural adaptation of Barratt Impulsiveness Scale (BIS-11) for administration in Brazilian adults. *J Bras Psiquiatr.* [Internet]. 2010 [citado em 25 out 2018]; 59(2):99-105. Disponível em:

- <https://www.scielo.br/j/jbpsiq/a/KJHvdcGNxgqy4DGCjHBnxqM/?lang=pt>. doi: <https://doi.org/10.1590/S0047-20852010000200004>
14. Conselho Nacional de Saúde (Brasil). Resolução n° 510, de 7 de abril de 2016. Aprova normas regulamentadoras de pesquisas envolvendo seres humanos [Internet]. D.O.U., Brasília, DF, 24 maio 2016 [citado em 22 set 2021]; seção I, (98):44-46. Disponível em: <http://conselho.saude.gov.br/resolucoes/2016/Reso510.pdf>
 15. Pires MCC, Raposo MCF, Sougey EB, Bastos Filho OC, Silva TS, Passos MP. Indicadores de risco para tentativa de suicídio por envenenamento: um estudo caso-controle. J Bras Psiquiatr. [Internet]. 2015 [citado em 17 out 2018]; 64(3):193-9. Disponível em: <https://www.scielo.br/j/jbpsiq/a/rKgyjdD6rWwXJBCqC8kxHp/?lang=pt>. doi: <https://doi.org/10.1590/0047-2085000000078>
 16. Lee GY, Choi YJ. Association of school, family, and mental health characteristics with suicidal ideation among Korean adolescents. Res Nurs Health. [Internet]. 2015 [citado em 17 out 2018]; 38(4):301-10. doi: <https://doi.org/10.1002/nur.21661>
 17. Wang L, He CZ, Yu YM, Qiu XH, Yang XX, Qiao ZX et al. Associations between impulsivity, aggression, and suicide in Chinese college students. BMC Public Health [Internet]. 2014 [citado em 17 out 2018]; 14(1):551. Disponível em: <https://bmcpublihealth.biomedcentral.com/track/pdf/10.1186/1471-2458-14-551.pdf>. doi:10.1186/1471-2458-14-551
 18. Creswell KG, Wright AGC, Flory JD, Skrzynski CJ, Manuck SB. Multidimensional assessment of impulsivity-related measures in relation to externalizing behaviors. Psychol. Med. [Internet]. 2019 [citado em 10 jan 2020]; 49(10):1678-90. Disponível em: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7043188/pdf/nihms-1558890.pdf>. doi: <https://doi.org/10.1017/S003329171800229>
 19. Zhang J, Lin L. The moderating effects of impulsivity on Chinese rural young suicide. J Clin Psychol. [Internet]. 2014 Jun [citado em 3 out 2018]; 70(6):579-88. doi: 10.1002/jclp.22039
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