INTERVENTIONS FOR THE PREVENTION OF SUICIDAL BEHAVIOR IN COLLEGES: INTEGRATIVE REVIEW

Intervenções para prevenção do comportamento suicida em universitários: revisão integrativa

Intervenciones para prevención del comportamiento suicida en universitarios: revisión integrativa

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ABSTRACT

Objective: To analyze the literature on interventions to prevent suicidal behavior in university students. **Method:** integrative review conducted in the Latin American and Caribbean Literature in Health Sciences, Web of Science, Medical Literature Analysis and Retrieval System Online, Cummulative Index to Nursing and Allied Health Literature and SCOPUS databases, between May and July 2018 , using the descriptors: ''students", "suicide" and ''health promotion". **Results:** six articles comprised a sample, 50% of which addressed interventions using software or internet links, 16.6% traditional methodology and 33.3% traditional interventions associated with technology. **Conclusion:** interventions for the prevention of suicide in university students must capacitate individuals in an accessible way, consistent with the context where university students are inserted.

Descriptors: Students, Universities, Suicide, Health promotion, Mental health.

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RESUMO

Objetivo: Analisar a literatura sobre intervenções para prevenção do comportamento suicida em universitários. **Método:** revisão integrativa realizada nas bases de dados Literatura Latino-Americana e do Caribe em Ciências da Saúde, *Web of Science*, *Medical Literature Analysis and Retrieval Sistem Online*, *Cummulative Index to Nursing and Allied Health Literature* e SCOPUS, entre maio a julho de 2018, utilizando-se os descritores: ''estudantes'', ''suicídio'' e ''promoção da saúde''. **Resultados:** seis artigos compuseram amostra, os quais 50% abordaram intervenções usando *softwares* ou *links* da *internet*, 16,6% metodologia tradicional e 33,3% intervenções tradicionais associadas às tecnológicas. **Conclusão:** intervenções para a prevenção do suicídio em universitários devem capacitar os sujeitos de modo acessível, consentâneas ao contexto onde universitários estão inseridos.

Descritores: Estudantes, Universidades, Suicídio, Promoção da saúde, Saúde mental.

RESUMEN

Objetivo: Analizar la literatura sobre intervenciones para prevenir el comportamiento suicida en universitarios. **Método:** se trata de una revisión integrativa en las bases de datos: Literatura Latinoamericana y del Caribe en Ciencias de la Salud, *Web of Science, Medical Literature Analysis and Retrieval Sistem Online, Cumulative Index to Nursing and Allied Health Literatura* y SCOPUS, entre de mayo a julio de 2018, utilizando los descriptores: '' estudiantes '', '' suicidio '' y '' promoción de la salud ''. **Resultados:** seis artículos compusieron muestra, que 50% abordaron intervenciones usando softwares o enlaces de *internet*, 16,6% metodología tradicional y 33,3% intervenciones tradicionales asociadas a las tecnológicas. **Conclusión:** intervenciones para la prevención del suicidio en universitarios deben capacitar a los sujetos de modo accesible, en concordancia con el contexto en el que se insertan universitarios.

Descritores: Estudiantes, Universidades, El suicidio, Promoción de la salud, Salud mental.

INTRODUCTION

Suicidal behaviors are associated, in a serious gradient, with ideas, desires, statements about wanting to die, planning of death and thinking about how such an attitude would influence people around them, as well as the suicidal act itself, characterized as a deliberate, intentional, conscious action, even if there is ambivalence, performed by the individual oneself, whose intention is death, using a means he believes to be lethal.[1]

Approximately 800,000 people commit suicide annually worldwide, which is equivalent to one person every 40 seconds, with a rate of 10.7 deaths per 100,000 inhabitants. It is estimated that by the year 2020, there may be a 50% increase in the annual incidence of suicide deaths worldwide, which would exceed the number of deaths resulting from combined homicide and war.[2]

Studies that discuss suicide are of fundamental importance when they include specific groups as they allow the planning of strategies aimed at prevention and appropriate intervention according to the identified needs.

Although studies involving university students are still restricted and scarce, suicide has a relevant magnitude and intensity in this population.[3]

Different factors are associated with suicidal ideation in university students, hopelessness, impulsivity, aggressiveness, perception of the body, communication difficulties and lack of social belonging are highlighted as possible factors that trigger this process. This moment is marked by a series of transformations considered as part of the personal, social and academic development process, which demands maturity and autonomy for decision-making in the face of the rigid determinations of the environment.[4]

The planning of strategies for coping with suicidal behavior based on identified risk and protective factors allows university students to experience academic life more comfortably. Otherwise, the changes and challenges that students face can bring intense psychological suffering and, in extremes cases, lead them to suicide.[5]

Although it is known about suicide prevention guidelines, the lack of planning, inability to manage risk, unavailability of resources, taboo and stigma, as well as the difficulty faced by the individual in seeking help condition barriers to the implementation of policies and actions that achieve a more comprehensive understanding of this behavior.[6]

In this context, it is necessary to carry out studies that allow a broader and more in-depth knowledge about interventions that prevent suicidal behaviors, enabling the planning of appropriate preventive strategies and actions, in order to minimize or even solve the problems faced during the academic life.

Therefore, this study aims to analyze the literature on interventions to prevent suicidal behavior in university students, answering the following research question: what interventions can be developed to prevent suicidal behavior in university students?

METHODS

This is an integrative literature review study conducted through six stages of investigation, with the research question being elaborated based on the PICo strategy (Population: students; Interest: suicide; Context: health promotion): What interventions can be developed to prevent suicidal behavior in university students?[7-8]

The search was carried out by two reviewers, simultaneously and independently, from May to July 2018, in the following databases: *Literatura Latino-Americana e do Caribe em Ciências da Saúde* (LILACS), Web of Science, Medical Literature Analysis and Retrieval Sistem Online (MEDLINE/Pubmed), *Cummulative Index to Nursing and Allied Health Literature* (CINAHL) and SCOPUS. Descriptors indexed in *Descritores em Ciências da Saúde (DeCS)* and Medical Subject Headings (MeSH) were used,

combined with Boolean operatives "*AND*" and "*OR*" (**Table 1**).

Table 1- Search expressions generated in the databases according to descriptors selected using the PICo strategy. *Teresina*, PI, Brazil, 2018

Descritores em Ciências da Saúde - DECS/Medical Subject Headings – MESH		
Descriptors	Data base	Final search expression
P = Students/*Estudantes*	LILACS	*Estudantes AND Suicidio AND Promoção da saúde*
I = Suicide/*Suicidio*	*Web of Science*, CINAHL and SCOPUS	College students *AND* Suicide *OR* Suicide attempt *OR* Suicide ideation *OR* Suicidality *AND* Health promotion
Co= Promoção da saúde/*Health promotion*	MEDLINE/Pubmed	Students *AND* Suicide *AND* Health promotion

Source: Research data, 2018.

The inclusion criteria were: primary studies, related to the theme, available in full in the databases. Duplicate articles, review studies, theses, dissertations and editorials were excluded, as well as studies involving high school and child students (**Figure 1**).

Figure 1- Flowchart of process of the investigation, selection and inclusion of articles. *Teresina*, PI, Brazil, 2018
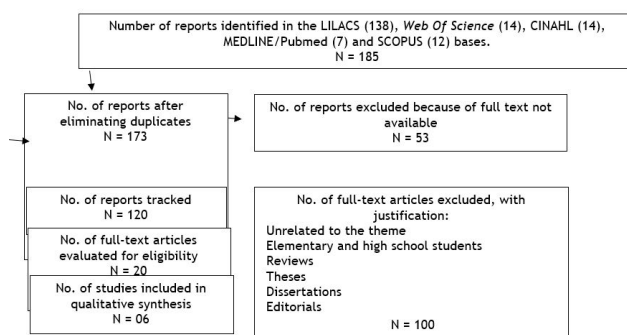
Source: Research data, 2018.

For data collection, an elaborate instrument was used containing information about the year of publication, country of origin, authors, details of the method, intervention, description, evaluation of the intervention and classification of the level of evidence, for which the recommendation of the *Oxford Center for Evidence-based Medicine was based*.[9]

RESULTS AND DISCUSSION

The publication period for the six selected articles varied between 2003 and 2018. Most articles were published in 2018 in the United States of America. As for the level of evidence, three (50%) articles were classified as level 1B and three (50%) as level 2B (**Table 2**).

Table 2- Distribution of references by year of publication, country of origin, authors, details of the method and level of evidence. *Teresina*, PI, Brazil, 2018

Article	Year/ Country	Authors	Detailing of the method	Level of evidence
A1	2018/ United States of America	Rein BA, McNeil DW, Hayes AR, Hawkins TA, Ng HM, Yura CA.	Training and research with 2,727 participants. Data were collected from the *online* application of the *Gatekeeper* behavior scale in pre and post-training groups.	1B
A2	2003/ Australia	Pearce K, Rickwood D, Beaton S.	Application of the intervention and evaluation (through questionnaires) pre and post-test with 42 university students from the University of Canberra.	2B
A3	2017/ United Kingdom	Silk KJ, Perrault EK, Nazione SA, Pace K, Collins-Eaglin J.	Quasi-experiment with control condition. Intervention and evaluation developed with 846 freshmen and 292 graduates on two neighboring campuses.	1B
A4	2018/ United States of America	Reiff M, Kumar M, Bvunzawabaya B, Madabhushi S, Spiegel A, Bolnick B, et al.	Training of 1,054 participants through a *workshop*. Pre and post-test were applied between groups.	1B
A5	2004/ United States of America	Clemmens D, Engler A, Chinn PL.	Evaluation and self-assessment through interviews with 115 students on the implementation of a course on health maintenance.	2B
A6	2018/ Iran	Bridges LS, Sharma M, Lee JHS, Bennett R, Buxbaum SG, Reese-Smith J.	Study based on a pre-experimental and post-test stage with *online* intervention with 28 educators and 300 university students from a university in the south of the United States of America.	2B

Source: Research data, 2018.

The productions addressed the application of interventions aimed at training university students, faculty and/or other campuses employees, in which interventions based on the use of *software* or *internet links* were predominantly adopted in three (50%) studies, one (16.6%) with traditional methodology (pamphlets, newsletters and printed articles in newspapers) and two (33.3%) encompassing traditional interventions associated with technology. It is noteworthy that these interventions were evaluated, by their executors, as effective and efficient (**Table 3**).

Table 3- Summarization of publications according to intervention, description and evaluation of the intervention. *Teresina*, PI, Brazil, 2018

Article	Intervention	Description of the intervention	Evaluation of the intervention
A1	Kognito Training	Modules available *online* at the University of West Virginia. Participation was encouraged through pamphlets, *workshops* and training sessions.	It prepared participants to identify and help students at risk for suicidal attitudes.
A2	Suicide Intervention Project (SIP)	Face-to-face *workshops*, conversation circles and distribution of educational materials on mental health. Participants were invited to evaluate the project through a pre-test questionnaire and after the training was completed.	It improved the participants' posture and confidence to talk about feelings related to mental health, changing attitudes and beliefs around suicidal behavior.
A3	Mental health campaign	Mental health messages disseminated through posters, table tops, digital signs and *e-mails* with contact numbers for counseling centers. Evaluation through questionnaires.	Participants became better prepared to identify problems related to mental health and to advise seeking help in counseling centers.

A4	Workshop I CARE	Training workshops to face crisis situations between students and teachers. Integral evaluation, using a mixed method approach, including quantitative and qualitative methodologies. Participants used their personal mobile devices to access the evaluation via a link.	Participants reported significant improvement in knowledge and acquisition of support skills and readiness to intervene in situations of mental suffering or crisis.
A5	Course " Introduction to Health "	Electronic book with links to health-related sites. Students participated in lectures, discussions and small groups of activities.	The students became more aware of the risk factors that cause illness and started to develop healthier habits, both physical and mental.
A6	Online education program "PRECEDE-PROCEED"	Available on an online learning platform, featuring factors related to depression and suicide. Evaluation post-test application	It enabled and reinforced the knowledge and skills on the predisposing factors for suicidal behavior.

Source: Research data, 2018.

After analyzing the articles, the information was grouped into four thematic categories: characterization of publications, interventions of a traditional nature, interventions of a technological nature and traditional interventions associated with technologies.

Characterization of publications

The limited number of publications found as an answer to the research question may be related to the fact that suicide continues to have a low priority in relation to public health actions, despite the interest in the subject having increased considerably in the last decades.[10]

In the United States of America, suicide is considered one of the main causes of death in university-age youth, being considered a priority population to be reached with mental health campaigns.[11]

In the academic environment, students, teachers and other employees are in an ideal position to intervene in situations of risk. These individuals can be trained to act as guardians and, therefore, be aware of the risk factors for suicide, recognizing them and recommending support services.[12]

Effective strategies mediated by technologies are due to advances in the means of communication and expansion of technologies, mainly via the Internet, leading to the emergence of a new virtual and social space in society, offering opportunities for the acquisition of knowledge.[13]

Traditional interventions

Within the scope of traditional suicide interventions are psychoeducational. These assist in the management of mental disorders based on behavioral, social and emotional changes, allowing prevention in health. Their educational character is geared towards the patient and family so that they acquire awareness and preparedness to deal with changes based on coping strategies, strengthening communication and adaptation.[14]

The Suicide Intervention Project (SIP) had the distribution of pamphlets, newsletters, conversations with health professionals and articles published in newspapers circulating on campus as a strategy to help subjects recognize mental health problems and promote safety to talk about these problems, in addition to publicizing the existence of available mental health support services among the academic community.[15]

After the application of the questionnaires to evaluate the intervention, comparative analysis of the averages of the responses before and after the intervention demonstrated significant results such as improvement in the ability of the participants in the approach to talk about mental health, contributing to the demystification of the subject and breaking the prejudice and stigma involved.[15]

It is noteworthy that the stigma or labeling of suicide is something that makes it difficult to care for individuals with this behavior, which can culminate in other comorbidities or even hamper the process of seeking help, as they feel discriminated and marginalized.[16]

Technological interventions

Technological interventions are relevant for the young population, including university students, as they are considered easy to access, cost-efficient for large populations and less stigmatizing than the more traditional ones. Although the internet is considered a risk factor for suicidal behavior, sites that spread suicide prevention have been developed by professionals.[17]

The articles that addressed the use of technology presented the gatekeeper training style, which are programs designed with the objective of directing people, who are in frequent contact with others, to improve knowledge, attitudes and skills to identify individuals at risk, determine risk levels and refer to an appropriate support service when necessary.[18]

The Kognito training program consists of multiple online modules, in which the interaction with virtual human characters that show signs of psychological distress, allows users to develop skills to identify risk characteristics and choose the best way to intervene. Participants completed pre and post-test surveys which showed significantly improved scores, higher levels of self-efficacy and user preparation.[19]

The I CARE training consisted of a program made available in an online environment, presenting topics such as students' mental health, psychoeducation, support resources made available on campus, among others. These resources prepared those involved for the recognition, understanding and processing of difficult emotions that can prevent communication with someone, offering ways to identify and differentiate situations of stress, suffering and crisis, using a variety of didactic and interactive techniques.[20]

The comparison of pre-workshop and post-workshop questions suggested significantly higher mean scores after completion in terms of knowledge and readiness to help. The evaluation of the participants was positive, with 97.9%

of the participants reporting that they would recommend the *workshop* to others.[20]

The *PRECEDE-PROCEED* educational program worked, through its four *online* teaching modules, with the dissemination of knowledge to educators and university students on statistical suicide data in the United States and among African Americans, risk factors, signs, symptoms, early detection, treatment, how to identify and help someone with depression or suicidal attitudes, the benefits of help, self-care to manage stress and support resources, responsibilities, counseling, psychotherapy and off-campus resources. [21]

Analysis of the mean scores and standard deviations obtained in the evaluation of the program demonstrated improvement in the educators' attitudes about aspects related to the identification of depressive symptoms. Approximately 86% of those trained scored satisfactorily in terms of attitudes about depression, control, skills to help people, reinforcing and empowering factors and behavior after completing *online* training.[21]

Traditional technological-related interventions

It is important that people are seen as trustworthy when they occupy a position of influence over actions that their peers take, a form of "social *marketing*" in order to persuade them to maintain similar attitudes.[22]

One of the productions brought a strategy developed with the support and participation of celebrities and influential people on campuses, transmitting messages of motivation and information about suicide through videos and advertisements in addition to the distribution of informational materials. Scales completed by the participants indicated a significantly higher number of students who would recommend university counseling centers and improved their perceptions about the stigma of mental health. Informing and recommending the availability of help is an important and effective strategy for the individual to feel supported and protected.[22]

The course entitled "Introduction to Health", conducted by the University of Connecticut School of Nursing, included in its approach health promotion and disease prevention through the use of an electronic book containing *links* to access various health-related sites and workshops. When asked to give their opinion on the course, students reported changes in bad behavior and the adoption of healthy lifestyle habits. In addition, it promoted reflection on how everyday factors — overload, stress and daily tension — can reflect on mental health and contribute to self-destructive behaviors.[23]

The publications demonstrate that the university provides a universe of health-related issues, especially with regard to unhealthy lifestyles. College students, most of the time, focus more on university activities and leave aside their social and recreational relationships. When they get time for some activity not related to the university, they are already at the limit of stress. Mental, physical and social health are intertwined and deeply interdependent.[24]

One of the limitations of this study is related to the limited number of publications on prevention of suicidal behavior in university students, since most of the publications found in the searches presented their interventions aimed at high school students, which made it difficult to discuss the topic. In addition, during the stages of this study, studies at the national level were not included, which did not meet the pre-defined objectives.

Studies like this contribute to the construction of subsidies for the planning and implementation of effective interventions to prevent suicidal behavior in the academic environment in order to promote the health of university students and minimize the rates related to this public health problem.

CONCLUSIONS

The reduced number of publications found made it difficult to discuss the topic.

Interventions applied in the university environment, through different models, have significant potential for promoting health and developing strategies that demystify the theme of suicidal behavior.

The interventions found are aimed at training the subjects and improving related knowledge, which favor the perception about the risk factors for suicide and the action either through dialogue and counseling or referring to a health service. Attitudes like this allow preventing or even reducing risk behaviors, favoring the health of university students.

Studies in this area are encouraged, so that the evidence base for this approach is significantly strengthened as well as contributing scientific inputs for the prevention of suicidal behavior in academia, minimizing the alarming rates related to this eminent problem.

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