

Mental vulnerability and suicide by contagion during the academic experience

Vulnerabilidade mental e suicídio por contágio durante a vivência acadêmica

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ABSTRACT: *Introduction:* Suicidal behavior evolves from a multifactorial etiology. Individuals share the same factors from the same society. The social subject at risk is conceived as a desperate situation and alienated through thoughts and values. The student fits this vulnerable situation. When exposed to detailed, demographic, and census information on local suicide cases, they may unconsciously admit to practicing this behavior and become part of a risk profile⁵. Known as the “Werther effect,” quantitative and qualitative media exposures to the suicide phenomenon influence the increase in suicide rates in individuals. The degree of influence impacts a dose-effect relationship and depends on variable characteristics for the process of imitation, identification, and reproduction of the event. An example of influence in the imitation process is the dissemination of techniques and, for the identification process, the presentation of names and profiles, such as celebrities or the social context of the suicide. The adequacy of disclosed information and awareness are essential elements for the success of suicide prevention programs. *Objective:* Establish the relationship between the mental vulnerability of higher education students and their predisposition to contagious suicide. *Method:* This is an integrative literature review based on SciELO, LILACS, Pubmed/Medline, RCAAP, and RCIPÉA databases using the descriptors: “suicide attempt,” “students,” “media,” and “mental health.” *Result:* 3,143 articles were found in the searched databases. After reading the title and abstract and considering the inclusion and exclusion criteria, 19 articles were eligible for the study. Two important textbooks were added to the references on the researched theme, and two articles were examined in the gray literature. *Discussion:* Higher education is a stage when there is possible psychological fragility, and it must be considered a risky period for mental disorders and tragic outcomes. Suicide news should be approached discreetly and be carefully reported without exaggerated details so that there is no praise for several aspects

of the fact. The young population is particularly vulnerable to the contagion effect for suicidal ideation due to a greater inclination towards identification and imitation phenomena. Adequacy of disclosed information and awareness are essential elements for the success of suicide prevention programs.

Keywords: Suicide; Students; Media; Contagion; Mental health.

RESUMO: *Introdução:* O comportamento suicida evolui de uma etiologia multifatorial na qual ocorre um compartilhamento de fatores por indivíduos de uma mesma sociedade⁵. O sujeito social em risco é aquele que se encontra, por meio de pensamentos e valores, em situação desesperada e alienada. O discente se enquadra nessa conjuntura de vulnerabilidade, de modo que, quando exposto a informações detalhadas, demográficas e censitárias locais sobre casos de suicídio, pode vir a admitir inconscientemente o comportamento da prática, e, então, se tornar um perfil de risco⁵. Conhecido como “Efeito Werther”, as exposições midiáticas quantitativas e qualitativas sobre o fenômeno suicídio influenciam no aumento das taxas de suicídio em indivíduos. O grau de influência possui relação dose-efeito e depende de características variáveis para o processo de imitação, identificação e reprodução do evento. Um exemplo de influência no processo de imitação é a divulgação, feita majoritariamente em redes sociais, de técnicas de suicídio, e, para o processo de identificação, a apresentação de nomes e perfis, como, por exemplo, de celebridades ou contextos sociais de suicidas¹⁵. A adequação de informações expostas e a conscientização são elementos essenciais para o sucesso dos programas de prevenção do suicídio. *Objetivo:* Estabelecer a relação entre a vulnerabilidade mental de estudantes do ensino superior e a sua predisposição ao suicídio por contágio. *Método:* Trata-se de

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uma revisão integrativa da literatura a partir das bases de dados SciELO, LILACS, PubMed/MedLine, RCAAP, RCIPEA e da literatura cinzenta usando os descritores: “tentativa de suicídio”; “estudantes”; “meios de comunicação”; e “saúde mental”. Resultado: Foram encontrados 3.143 artigos nas bases de dados pesquisadas. Após leitura do título e resumo e, considerando os critérios de inclusão e exclusão, foram elegíveis para o estudo 19 artigos. Somam-se às referências mencionadas dois livros-textos importantes para a temática pesquisada e dois artigos pesquisados na literatura cinzenta. Discussão: O suicídio como notícia deve ser abordado de forma discreta e reportado cuidadosamente sem exagero em detalhes para que não haja enaltecimento do fato

INTRODUCTION

Suicide is a phenomenon provoked by complex invariable causes and reaches the sociocultural scope of the individual, and it encompasses all age brackets. It evolves from a multifactorial etiology and a psychosocial, biological, cultural, and environmental nature. Suicidal behavior arises as continual self-destructive behaviors¹.

The subject is immersed in a morbid condition that promotes adverse developments as predictive acts and increases the probability of harmful and serious consequences or reduces and exhausts the feasibility of positive events to their health. Thus, self-destructivity does not just occur in performing the act, but also in omission: the individual becomes negligent of their own health and safety¹.

As a social casuistry, the academic pathway becomes a period when there are stressing conditions for the majority of higher education students². Thereby, there are increased anxiety symptomatology and depressive conditions, among which suicidal ideation may be present. The identification of a potentially tragic ending occurs quite often only in severe cases³.

When the individual is in a mentally fragile condition and includes the debilitating social context in unconsciously facing an array of psychotic aggressions adopting an attitude of vulnerability, practices of violence and suicide can implicitly influence the student according to established observational contact based on self-provoked deaths, a phenomenon denominated as imitational or contagious suicide⁴.

The scientific deficiency in addressing this issue displays the general unfamiliarity among most of the community, supporting the mentioned vulnerability due to the absence of preventive and protective reasoning. For that reason, it is necessary to establish a relation between mental vulnerability and the risk of suicide by contagion among higher education students. It is also essential to consider the relevance of preventing cognitive and behavioral ruptures and negatively impacting consequential academic capacity.

METHODS

This is an integrative literature review based on

em diversos aspectos. A população jovem é particularmente vulnerável ao efeito contágio para ideação suicida devido a uma maior inclinação para fenômenos de identificação e imitação. O ensino superior é um estágio de possível fragilidade psicológica e deve ser visto como período de risco para distúrbios mentais e desfechos trágicos. A adequação de informações expostas e a conscientização são elementos essenciais para o sucesso dos programas de prevenção do suicídio.

Palavras-chave: Suicídio; Estudantes; Mídia; Contágio; Saúde mental.

the following databases: SciELO (Scientific Electronic Library Online); LILACS “Literatura Latino-Americana e do Caribe em Ciências Sociais e da Saúde” (Health Information from Latin America and the Caribbean Countries); PubMed/MedLine (Medical Literature Analysis and Retrieval System Online); and repositories: RCAAP “Repositório Científico de Acesso Aberto de Portugal” (Open Access Scientific Repository of Portugal); and RCIPEA “Repositório do Conhecimento do Instituto de Pesquisa de Estatística Aplicada” (Knowledge Repository from the Applied Statistical Research Institute); as well as specific textbooks.

The bibliographic research was performed based on the period from August 2017 to March 2021, employing the following descriptors on health: “suicide”; “students”; “media”; “contagion”; and “mental health,” according to Descriptors on Health Sciences (DeCS/Bireme). Inclusion criteria were defined for refining the research addressing suicidal epidemiological aspects, suicide among adolescents and youth, suicide by contagion, and students’ mental health. Articles that did not address the relationship between suicide and students were applied as the exclusion criterion.

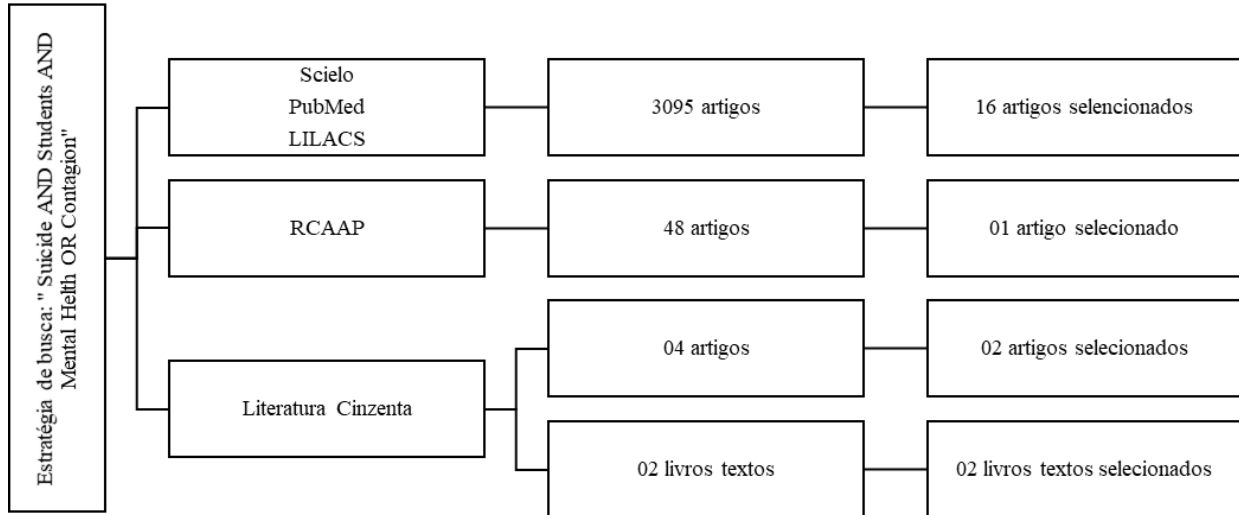
The time interval was not stipulated in the research for selecting the most significant number of articles. After reading the title and abstract, the articles were selected, abiding by the inclusion and exclusion criteria, and after choosing the articles, they were read in their entirety. The following information was recorded from the selected articles for this study: data on the authors, location, and year of publication, identification (title), the publishing periodical, characterized methodologies, and results were extracted and transcribed to an instrument (extraction report) for presentation.

RESULTS

Three thousand one hundred forty-three articles were selected from the researched databases after cross-referencing the descriptors. Subsequently, the articles were submitted to the inclusion and exclusion criteria. After that procedure, seventeen scientific articles were eligible for the study. The most significant number of the manuscripts was found in the SciELO, LILACS, and MedLine databases.

There were also four articles and two textbooks examined in gray literature, consulted through the “Associação Brasileira de Psiquiatria” (Brazilian Association of Psychiatry) (ABP), the World Health Organization (WHO),

and from the collection of periodicals at the “Universidade Federal da Paraíba” (Paraíba Federal University) (UFPB). Two articles and two textbooks were included from those sources, as described in the following flowchart.



Flowchart: Research strategy, number of publications, results, and articles selected for review

Chart 1 presents the eligible studies for the research. These include articles published in Brazil, China, the United States, the United Kingdom, Portugal, France, Canada, Australia, and New Zealand. The articles found in the databases discuss the subject of the epidemiology of suicides among students. The majority of the information

is on Brazilian students majoring in medicine, comparing students to other nationalities, the risk profile for ideation, and suicidal acts in this population, the influence from the media developed from this, and the necessity of adapting information from media coverage. There was relevant and defining information from gray literature for this study.

Chart 1 – Eligible article characterization for the study

Author, Country, year	Title	Periodical	Methodological characteristic	Results
Botega NJ ¹ Brasil 2014	Comportamento suicida: epidemiologia	Psicologia USP	Systematic review	National and local strategies to prevent suicides can be prepared for controlling the number of suicides.
Botega NJ ² Brasil 2005	Suicidal behavior in the community: Prevalence and factors associated with suicidal ideation	Rev Bras Psiquiatr.	A systematic review and analytical study	Brazil is among the countries with the most significant number of suicides. Specific locations of mental disorders presented the majority of suicide cases.
Gonçalves A et al. ³ Portugal 2011	Comportamentos suicidários em estudantes do Ensino Superior: Fatores de Risco e de Proteção.	Millenium	Systematic review	The concern is necessary for preventing and promoting people’s public and mental health at risk, especially young students.
Durkheim É ⁴ Brasil 2000	O suicídio: estudo de sociologia	Martins Fontes Ed.	Textbook	The individual who is in a mentally fragile condition and debilitated social context can be faced with suicidal ideation and influenced to practice that based on imitation.
Loureiro PR ⁵ Brasil 2013	Os efeitos da mídia sobre o suicídio: uma análise empírica para estados brasileiros.	IPEA	Systematic review	The media is the third motivator for suicide, ranked after unemployment and violence.
Santos HGB et al. ⁶ Brasil 2017	Factores associated with suicidal ideation among university students.	Rev Latino-Amer Enfermagem.	Cross-sectional analytical study	The presence of suicidal ideation is evident among university students. It is necessary to pay special attention to the university population as they are in the most vulnerable phase due to factors they face in an academic context. The association between depressive symptoms and suicidal ideation is striking.

Chart 1 – Eligible article characterization for the study

Author, Country, year	Title	Periodical	Methodological characteristic	Results
Sadock BJ ⁷ Brasil 2017	Compêndio de Psiquiatria: ciência do comportamento e psiquiatria clínica.	Ed Artmed	Textbook	Mental stress factors precede suicidal behavior.
Millan LR ⁸ Brasil 2008	Assistência psicológica ao estudante de medicina: 21 anos de experiência	Rev Assoc Méd Bras	Cross-sectional study	During a 21-year interval, the suicide coefficient among the student population (USP health sector students) was greater than in the population of São Paulo City.
Pacheco JP, et al. ⁹ Brasil 2017	Mental health problems among medical students in Brazil: a systematic review and meta-analysis.	Rev Bras Psiquiatr	Systematic review and meta-analysis	The literature reports a greater prevalence of depression and other mental health problems compared to students to other individuals of the same age.
Cerchiari EBN ¹⁰ Brasil 2005	Prevalência de transtornos mentais menores em estudantes universitários	Estud Psicol	Cross-sectional analytical study	There is an increased prevalence of lower mental disorders among students.
Chen J ¹¹ China 2020	Factors affecting psychological health and suicidal behavior: based on a survey of 10 340 medical students from three universities	Nan Fang Yi Ke Da Xue Xue Bao	Cross-sectional study	Mental health and suicidal behavior among medical students are affected by various aspects, such as family relationships and experiences during their childhood.
Horwitz AG, et al. ¹² Estados Unidos 2020	Sociodemographic differences in barriers to mental health care among college students at elevated suicide risk	J Affect Disord	Cross-sectional study	Although there is a growing number of university students who face thoughts and suicidal behaviors, the usage rates of seeking mental health services continue low and face specific barriers based on certain subgroups of students.
Notredama CE, et al. ¹³ França 2015	Le traitement médiatique du suicide: du constat épidémiologique aux pistes de prévention	Presse Med.	Cross-sectional analytical study	The suicide media coverage is associated with an increased risk of morbidity and mortality due to the effect of imitating vulnerable people.
Colman I ¹⁴ Canadá 2018	Responsible reporting to prevent suicide contagion.	CMAJ	Integrative review	There is evidence that suicidal behavior can be contagious, and the media coverage can contribute to contagion.
Blasco-Fontecilla ¹⁵ Nova Zelandia 2012	On suicide clusters: more than contagion.	Aust. NJZ psychiatry	Integrative review	The effect of information on suicides to a target audience occurs through association to social learning, imitation, and identification.
Bohanna I ¹⁶ Canadá 2013	Suicide “contagion”: what we know, and we need to find out	CMAJ	Integrative review	Young people exposed to suicide have an increased risk factor for future suicide ideation.
OMS ¹⁷ Geneva 2000	Prevenir o suicídio: um guia para profissionais da mídia.	Depart Saúde Mental, OMS	Ecological study	Suicide prevention is feasible, but it demands a series of activities in different sectors.
Edwards T, et al. ¹⁸ Austrália 2020	Social Media Responses to Online Suicide-Related News Articles	Crisis	Descriptive study	The majority of online shared news in the Australian media reasonably adheres with the Mindframe suicide report guidelines.
Gregory P, et al. ¹⁹ Reino Unido 2020	The experiences of people bereaved by suicide regarding the press reporting of the death: qualitative study	BMC Public Health	Cross-sectional study	The intrusion and invasion of privacy from the press were noticed in seeking information from family members and friends mourning from suicide experiences, in most cases breaching the guidelines on reporting suicides in the media. That represents a potential trauma to the suicidal risk group.
Carvalho C ²⁰ Brasil 2017	O delicado lugar do suicídio na imprensa.	Rev Temática. UFPB.	Review	The disclosure of news on suicides can generate an imitation effect.
Associação Brasileira de Psiquiatria ²¹ Brasil 2009	Comportamento suicida: conhecer para prevenir.	ABP	Guideline primer	Inadequate media coverage can provoke suicidal behaviors.

DISCUSSION

Suicidal behavior has evolved into a multifactorial etiology, whereby individuals from the same society share factors⁵. The social subject at risk is the person who coexists in a desperate and alienated situation through one's thoughts and values. The involvement of a young person who lives in a community establishes an intrinsic relation to their mental sanity. When psychic instability overlaps a person from a collective instability and is subjected to a shared social problem, they become predisposed to the risk of a factual self-destructive behavior of suicidal ideation⁴.

Diverse authors^{5,6,7} report that the student fits into that vulnerability profile since they are exposed to continuity of sociocultural transgressions that converge on vulnerable experimented behavior. Previous mental stressors are significant risk factors bringing about psychiatric disorders and suicidal behavior.

Throughout a student's education, they play a role in unstable situations, such as an exhaustive load of commitments, reduced family contact, restricted leisure activities, and anxiety regarding the future⁸. That scenario is marked by challenges and doubtful approaches, contributing to developing mental disturbances; among them are suicidal behaviors. The new conditions they are exposed infer a range of obstacles that include the worries and expectations related to academic success and social, financial, and family problems³.

Pacheco *et al.* stated in their article that 28% of medical students around the world face depression. In Brazil, that proportion is around 31%, as well as detaining significant proportions from other psychic disorders acquired during the course of their academic experience⁹.

In that same study, a meta-analysis was performed, including a total of 18,015 Brazilian medical students. There was a significant prevalence of mental problems acquired from the academic situation, when considering that analysis, such as the suicidal ideation in 2,414 students (13.4% of the study population)⁹.

In another state, Mato Grosso do Sul¹⁰, at two public universities, in the year 2005, in a sample of 558 students from diverse fields of study, there was a prevalence of 25% of students who were proven to suffer from less severe mental disorders. Their identified related symptoms were anxiety, depression, and somatic symptom disorders.

There was a significant frequency observed in studying these pathologies in students ranging from 19 to 24 years old. They arose from families with a low monthly income and who were deprived of performing any paid activity. Among the relevant factors presented by the study, the most noteworthy are psychosomatic disorders, psychic stress, and performance insecurity, listed in that order of magnitude. According to some authors, there is a linear association between stressors and the student's level¹⁰.

The research performed in China included 10,340

students proved that medical students are exposed to family, physical, and psychological violence, plus negative experiences from childhood as they are more prone to face suicidal ideation. Besides that, their anxiety and depression conditions contribute to an increased level of attempted suicides¹¹.

The analysis performed on 3,358 university students in the United States who suffer from increased suicide risks pointed out that the existing barriers in utilizing healthcare service facilities include a series of issues. Regarding that, younger students were noted that they were more prone to report concerns on their privacy and stigma; thereby, in their perception there was a low degree of the need for treatment. On the other hand, financial matters are the most prominent among women and racial/ethnic minorities¹².

A study performed by the "Grupo de Apoio a Alunos" (Student Support Group) (GRAPAL) at the "Faculdade de Medicina da Universidade de São Paulo - FMUSP" evaluated the suicide coefficient from 1965 to 1985. The suicide coefficient among the college students was five times higher than the general population of the city⁸.

It became relevant to emphasize that young people are especially vulnerable to the contagious effect of suicide due to their greater inclination regarding identification and imitation phenomena¹³. The suggestion of the existence of people influenced by group behaviors and the propagation of these ideas on social media is a phenomenon displayed as a contagious effect. It is treated as a component of a stipulated epidemic causing suicidal events in that same society⁵.

The report of suicides, according to some scholars, by the media is a mechanism related to the increased probability of an individual exposed to the news, which starts to consider that act as an acceptable solution to their problems. That harmful effect originates from social learning, imitation, and identification processes.

It is known as the "Werther Effect," from quantitative and qualitative exposures to the media causing an increase in the suicide rates among individuals. The influence level is related to the dose-effect and depends on variable characteristics for the process of imitation, identification, and reproduction of the event. An example of the influence on the imitation process is the disclosure of suicide techniques and, for the identification process, the presentation of names and profiles, such as celebrities or social suicidal contexts¹⁵.

From 1980 to 2009, on the national scope, the media was rated as the third-largest factor motivating suicides, followed by unemployment and violence. A 5.34% increase has been estimated in suicides among men from 15 to 29 years old exposed to content on suicides in media vehicles⁵. The suicidal ideation rates are greater in Canada among young people exposed to information on suicide events¹⁶.

The adequacy of available information and

awareness are essential factors for the success of suicide prevention programs. However, there are observable considerations regarding the effect of media on susceptible groups¹⁴.

Notredame et al.¹³ confirm that considering the media approach on a suicide event, a protective effect can occur named “Papageno.” That protection factor consists of reducing suicide rates based on the knowledge of the event as a condition of morbidity and mortality parallel to the construction of the refusal to view that as a solution to problems. It is necessary to focus less on sensationalism and more emphatically on the alert signs and support resources to achieve that outcome. Thus, the importance of collecting data from scientific databases to reduce the negative impact from the media coverage propagating the suicidal ideal and fosters the protective effect based on established technical bases for disclosure.

Studies have stated that news on suicide must be approached discretely and cautiously reported without detailed exaggeration so that there is no exaltation of the fact on diverse aspects. It must be published as an event in a broad and not unilateral context, from multifactorial causes and not just intrinsically on a condition or individual^{5,17}.

The literature presents some proposals for the adequacy of the disclosure process of suicidal events, as follows: avoid the word suicide in headlines, avoid emphasizing the impact from the death, do not present details on the practice and the lethal method, taking advantage to make the population aware on the prevention and possible information and support methods related to suicide^{5,17}.

One Australian study researched a series of news items addressing suicide and suicidal ideation to analyze adherence to publication guidelines. From that perspective, there was decreased adherence found regarding the word “suicide” in the title, suggesting that it still is a relatively common method for attracting the reader. Besides that, supplying information related to support methods was associated with the second-lowest degree of conformity. That is surprising considering the availability

of information on support services¹⁸.

The fight against suicide is known to increase the risk of suicide. In this scenario, the British study identified the inadequate behavior of journalists regarding the search for information, resulting in the intromission and violation of the right to privacy of the mourning family and imprecise representations and sensational details on the occurrence. Thus, the suffering and vulnerability of the people closest to the suicide victim were exacerbated¹⁹.

The prevention of suicide by contagion by media publication does not solve anything by omitting disclosure but through the adequacy of published news²⁰. So that it does not promote the normalization of the fact, neither does it isolate the individual context of the victim. The problem must be presented as a situation of diverse causes. The tragic outcome must not be demonstrated as impacting and least of all as a stigma, but for prevention²¹.

CONCLUSION

Suicide is displayed as a problematic approach to prevention and control due to its complexity and as a serious public health problem. Although it is possible, the phenomenon diligence includes a range of activities pondering a social and psychiatric nature.

Higher education is a phase of possible psychological fragility, and it must be considered a risky period for mental disorders and adverse outcomes.

The literary basis is still scarce on the approach facing this thematic information amplitude. Thus, it is necessary to foster correct and efficient media manipulation for instigating scientific discussions on the phenomenon of suicide by contagion. Thereby, the technical pillars were constructed to reduce the morbid mortality of a suicidal event in this population.

Adequacy in media treatment on the phenomenon composes the primordial basis for suicide prevention programs’ success to avoid the potentiality of imitative propagation on normality prepared on suicide.

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Author contributions: *João Paulo Chagas Muniz:* prepared his final course paper as the basis for this article. He acted in planning the research, prepared the bibliographic review, and wrote the article. *Kamila Binsfeld Finger:* Updated the data, contributed to writing the article, and formatted it according to the magazine formatting standards. *Waldman Santos Davi:* Contributed to collecting data, selected articles for the study. He collaborated with the primary author in this process. *Kassya Stephanie Sousa de Araújo –* Revised the initial text and worked on formatting the article according to the magazine formatting standards. *Mayra Aparecida Côrtes:* The research advisor contributed to planning the study, beginning with the preparation of the study until the final revision of the article submitted

for submission.

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