

## **Suicide-associated factors in the medical class: meta-analysis and predictive inference**

### **Factores asociados ao suicídio na classe médica: meta-análise e inferência preditiva**

DOI:10.34117/bjdv7n4-412

Recebimento dos originais: 15/03/2021

Aceitação para publicação: 15/04/2021

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### **COMMENT**

Suicide is considered an important public health problem and with considerable rates around the world(1). Some population groups become more susceptible to this worsening of mental health. One of these classes is the medical one, and it has been affecting both health students as professionals. The estimated average of depression is

25%, representing a risk factor for suicidal ideation, and a frequency of 2.45 times higher when compared to other people(2).

The Medical school requires an integral health (physical and mental), because there is a constant need for resistance to consecutive pressures to which students are subject(3). These situations may lead to the development of depression, bipolar disorder, addiction to alcohol and other drugs and much anxiety. All of these factors may contribute to a rate of 70% of suicide, being higher in doctors than in the general population(4).

The high rates of suicide in the medical class incites the need for analyses and discussions on the topic, these points allow planning potential strategies for the development of health prevention. Thus, the objective of this study was to analyze suicide-associated factors in the medical class.

In order to substantiate the study, a systematic literature search was performed on MEDINLIE, PUBMED, SciELO, SCOPUS, LILACS, Science Direct and Web of Science. Other relevant literatures were also considered, such as arguments of authority for reasoning.

There was inclusion of studies without temporal clipping, due to the scarcity of studies specifically involving the medical class; available with abstract or in full, excluding studies with a high risk of bias analyzed by the GRADE system. There was analysis of risk factors for the development of suicide among students and doctors, as well as the proportion of the class affected.

The information was collected with the use of descriptors and the following strategy: "risk factors" AND "suicide" AND doctors. The information extracted was the number of suicides and associated risk factors. A correlation analysis and proportion were carried out using the software Rstudio.

Initially, 470 studies were found, of which 10 were selected to compose the reasoning and analysis. Figure 1 unveils the analysis of the association between the area (medicine) and the development of suicide and figure 2, the ratio of these cases.

Figure 1: Association of suicide between students and doctors

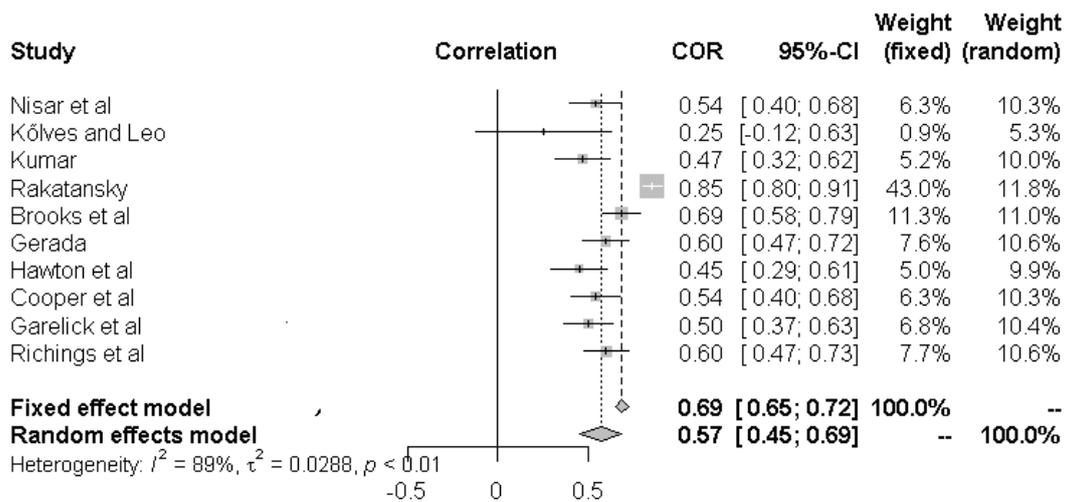
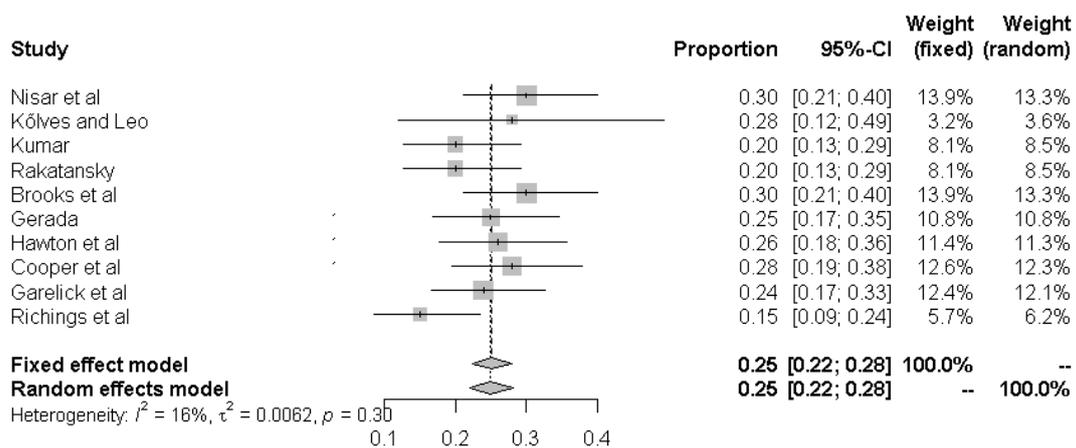


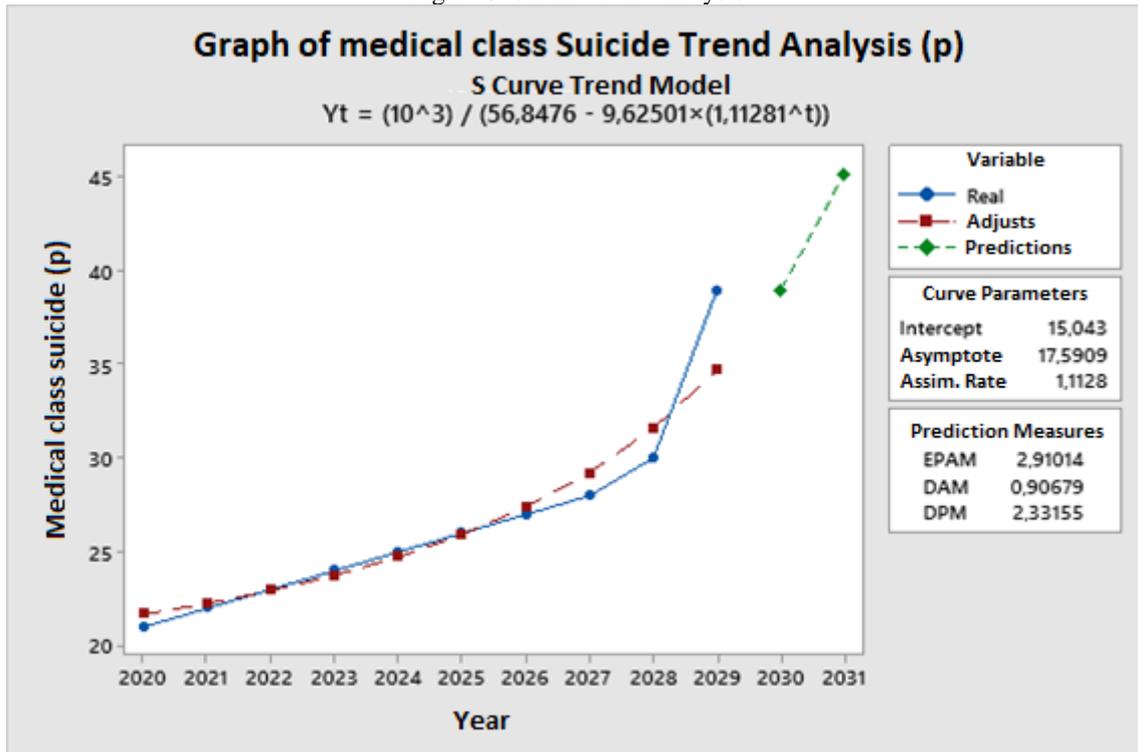
Figure 2: Ratio of cases of suicide



It is possible to check a high association of 0.57 and a ratio of approximately 25% with  $p$ -value  $< 0.05$ .

Researchers indicate a number of pragmatic factors that contribute to the suicide involving doctors, which include mood disorders, use of drugs and alcohol-related disorders, cognitive style, psychosocial factors and particular characteristics of personality(5). Another group of highlight in this context are the medical interns, who, in addition to the predisposing factors, are often exposed to intimidation on the part of their superiors and directors of programs, which configures a type of bullying in this environment(6). Through a prediction analysis, there is a possibility of great growth in the coming years:

Figure 3: suicide trend analysis



Many factors, such as an extensive workload, intense studies, contribute as risk factors. These are points that accompany the person since graduation, period in which there arise some frustrations, causing stress(7). During the academic to professional transition, pressures associated with selection tests encourage the need for more hours of study, which generate pictures of anxiety and other psychological disorders that can trigger negative health events(8).

The professional experience may also act as a trigger for suicide. The experience with the patients, and the related sufferings, can contribute substantially to the development of an emotional vulnerability(9). In this way, there is a clear need to adopt measures aimed at good mental health and strategies that could change the panorama of stress to which doctors and medical students are exposed(10). A discussion with more than 20 years, but which has not yet obtained the proper significance in the scientific environment.

For the doctor psychiatrist at the Psychiatry Institute of USP (IPq-HCFMUSP), Arthur Danila, among the factors that can trigger these events with students are the changes in interpersonal relations in society – more fragile and transitory – and the lack of dialog between direction, professors, students and their families. In Brazil, the Regional Councils of Medicine decided to widen the approach and clarification about suicide in

the Brazilian medical population, through booklets, lectures and symposia on the theme, creating the yellow September. In order to deploy a humanistic view about the doctor, besides facilitating that the professional seek treatment with specialists(11).

Even with the worrying signs of occurrences of suicide among doctors and medical students, studies and data that address the suicide in this class are still incipient, which requires the effective accomplishment of in-depth researches about the topic. What needs to be stressed is that suicide is the tragic outcome of a mental illness, often undiagnosed and untreated. Depression is the psychiatric disorder most often associated with suicide. This is very important, because it means that, in almost all cases of suicide, the individual presented behavioral changes, increased indecision, disorganization and related symptoms that could have been perceived and directed to health prevention.

Some alternatives may be considered as an improvement of this situational frame. One of these measures would be the rest breaks during the work period in the university and confidential sessions, with clinical psychologists, free of charge. The specialist in medical ethics Arthur Caplan, director at the Division of Medical Ethics of the NYU Langone Medical Center, encourages the student to complain of mistreatment and excesses. He emphasizes that, since students are cheap work force and without influence in the academic environment, they are exposed to mistreatment(12).

In this way, an early approach of this class of professionals could be an alternative to prevent significant injuries in health like depression. The large proportion of suicides is a fact that should be rethought by educational and professional sectors involved in order to route to better health outcomes in this population.

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