PREVALENCE OF COMMON MENTAL DISORDERS AMONG MEDICAL STUDENTS DURING THE COVID-19 PANDEMIC

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ABSTRACT

Common mental disorders (CMD) have been frequently identified among university students in the health area, especially in Medicine. It is believed that characteristics inherent to the course have a potential influence on the student's mental health. When adding the pandemic context, with its inherent social restrictions, the psychological determinants related to the unknown pathology and the fear of the rapid spread of the new coronavirus, there is the possibility of increasing the risk factors for psychological distress in this population. To estimate the prevalence of CMD among medical students during the COVID-19 pandemic, analyzing its main determinants in the academic, social and economic spheres. Cross-sectional study, carried out with 388 medical students in Salvador/BA., Data on sociodemographic and academic aspects, life habits, comorbidities and symptoms of non-psychotic disorders were collected using the Google Forms platform, measured by the Self-Reporting Questionnaire (SRQ-20). The prevalence of CMD was 39.7% among medical students, with 47.4% in the basic cycle, 40.3% in the clinical cycle and 12.3% in the internship period. Among the factors associated with the emergence of CMD are sedentary lifestyle, smoking, use of substances that enhance academic performance, dissatisfaction with one's academic performance, poor sleep quality, lack of appetite, frequent headaches, poor digestion, suicidal ideation and sadness. There was a higher rate of non-psychotic mental disorders among women, with no difference regarding the academic cycle and the administrative type of the educational institution. During the COVID-19 pandemic, a significant prevalence of CMD was demonstrated among female, white, single medical students who

live with family members and do not have their own income. Although studies suggest an increase in the prevalence among university students at the present time, the data from the present study remain in agreement with the literature data prior to the pandemic, showing that

the medical course itself is the main risk factor for higher rates of CMD in this population. However, further studies on the long-term impact of the pandemic on the mental health of university students are still necessary.

Keywords: Medial Students; Mental Disorders; COVID-19; Pandemics; Medical Education.

INTRODUCTION

In December 2019, the respiratory syndrome caused by the SARS-CoV-2 (COVID-19) was identified in Wuhan, China and spread rapidly throughout the world, culminating in the pandemic decree by the World Health Organization on March 11, 2020. Its accelerated spread, the prediction of the collapse of health systems, as well as the absence of specific treatment determined radical Public Health measures around the world – such as the quarantine and social isolation – in na attempt to minimize the impacts of this disease, especially in risk groups.

In this context, the current coronavirus pandemic has become the main focus of national and international collective health, enforcing new habits and routines in several countries simultaneously. One of the measures with the greatest impact on the population's lifestyle and mental health was social distancing, which affected the social and economic sectors through the modification of the way we work, study and experience leisure. The migration to the virtual environment was the solution found for the maintenance of several activities that were henceforth restricted by political decisions. Thus, educational models, including undergraduate courses, also needed to reinvent themselves, compulsorily migrating to the digital format.

In Brazil, the replacement of in-person classes by remote classes during the pandemic was determined by the Ministry of Education, resulting in the interruption of the physical operation of schools and universities and, consequently, in a new form of study. The sudden changes required immediate and compulsory adaptation by the students, which could predispose future physicians to psychological distress.

Additionally, factors inherent to the rapid spread of na unknown virus, the fear of being infected, the depiction of the dissemination capacity by the media and the possibility of fatal disease cause anxiety and fear in most individuals, directly interfering with their psychological well-being. This fact is demonstrated by the exponential increases in the statistics of mental symptoms in several nations during this period, such as feelings of guilt, sleep disturbances, generalized sadness, changes in eating patterns, lack of concentration, irritability, memory difficulties, fatigue and somatic complaints, characterizing the Common Mental Disorders (CMD), a set of somatic, anxiety and depressive (SAD) symptoms that can be triggered by stressful factors.

It is known that, during epidemics, the individuals' mental health impairments tend to be greater than the number of infected people, a fact that can be maximized with the increase in the pandemic dimension. Therefore, mental symptoms can be triggered in healthy individuals and intensified in patients with previous mental comorbidities, including crises related to CMDs and an increase in the suicide rate.

Medical students, even without a pandemic, are prone to factors that impact their quality of life and mental health, including CMD symptoms, which are quite prevalent among university students. It is believed that the changes in lifestyle and in the educational system required by the current contexto have amplified the psychological distress of these students15, increasing the chance of the association of psychological determinants, with the restrictive measures imposed in the pandemic acting as risk factors (independent or cumulative ones) for mental disorders in this population. Therefore, the aim of this study was to estimate the prevalence of CMD among medical students during the current pandemic, analyzing the main determinants of this vulnerability in the academic, social and economic spheres.

METHOD

An analytical, observational, quantitative, cross-sectional study was carried out with medical students aged > 18 years of age and regularly enrolled in Higher Education Institutions (HEI) in the city of Salvador, state of Bahia, Brazil, between July and October 2020.

The sample consisted of medical students recruited using the Snowball16 method – a non-probabilistic sampling technique based on references from the same category. The sample number of 238 individuals was calculated using the *Commentto* tool,

considering a total population of 7,140 medical students in the city of Salvador, Bahia, according to data made available by the Ministry of Education, through the e-MEC system. When considering the reliability of 95%, a margin of error of 5% and the addition of 10% of individuals. due to the possibility of losses, the minimum number of 262 participants for this study was obtained. University students who had not completed their semesters or those withn incomplete data were excluded.

A structured questionnaire was applied for data collection using the Google Forms platform, of which link was sent electronically to specific groups of medical students by e-mail, instant messaging applications and social networks. The first part consisted of 24 multiple-choice questions, covering sociodemographic aspects (age, gender, ethnicity, marital status, degree of religious involvement, who they lived with, socioeconomic conditions), academic data (educational institution, period of the course and satisfaction with academic performance), lifestyle habits (leisure activities, physical activity, sleep time, consumption of substances such as alcohol, tobacco products and psychostimulants for cognitive neuroenhancement purposes) and comorbidities.

The CMDs were screened using the Self-Reporting Questionnaire (SRQ-20), an instrument developed by the World Health Organization for this purpose and validated in Brazil. The instrument consists of 20 items with dichotomous answers (yes or no). Each positive answer corresponds to 1 point and the sum of the points totals the final score, which is related to the probability of non-psychotic disorders: 0 points corresponds to zero probability and 20 points suggests a significant probability. A result ≥ 7 indicates mental suffering.

Data analysis was performed using the IBM SPSS statistical software, version 26.0. Frequency and percentage were used for the analysis of categorical variables; arithmetic average and standard deviation for numerical variables with normal distribution; median and interquartile range for numerical data with asymmetric distribution. Statistical associations were performed using the Kruskal-Wallis Test for continuous variables and the Chi-Square Test for categorical variables. The Relative Risk (RR) and the Odds ratio (OR) were calculated considering the 95% confidence interval. To analyze the relationship between the variables, the contingency coefficients were measured. The dependence between variables was classified as weak (from 0 to 0.29), moderate (from 0.3 to 0.69) or strong (above 0.7). Values of $p<0.05$ were considered statistically significant.

The research project was approved by the Research Ethics Committee of *Centro Universitário de Tecnologia e Ciências*, through the Certificate of Presentation for Ethical Appreciation (CAAE) number 32928620.2.0000.5032, Opinion number 4.304,278, in compliance with Resolutions 466/12 and 510 /16 of the National Health Council. The participants'agreement with the Free and Informed Consent Form (FICF) was a prerequisite for completing the questionnaire.

Com base no texto "**prevalence of common mental disorders among medical students during the covid-19 pandemic"**, responda às questões de 1 a 5.

Questão 01

Com base no texto, responda às seguintes questões:

    a) Qual o objetivo do artigo? (1,0)

    b) Qual a metodologia usada para a coleta dos dados? (1,0)

Questão 02

De acordo com o texto, responda às seguintes questões:

    a) Quais são os resultados da pesquisa? (1,0)

    b) Quais conclusões a pesquisa chegou? (1,0)

Questão 03

De acordo com o texto, responda às seguintes questões:

    a) Quais fatores levaram ao aumento exponencial na estatísticas de sintomas mentais no período da pandemia de Covid-19? (1,0)
    b) Qual foi o contexto do desenvolvimento da pesquisa? (1,0)

Questão 04

a) Como foi estruturado o questionário para a pesquisa? (2,0)

Questão 05

De acordo com o texto, responda às seguintes questões:

a) Como foi análise dos dados do estudo? (2,0)

Com base no texto "**prevalence of common mental disorders among medical students during the covid-19 pandemic"**, responda às questões de 1 a 5.

Questão 01

Com base no texto, responda às seguintes questões:

a) Qual o objetivo do artigo? (1,0)

Espera-se que o (a) candidato (a) aponte que o objetivo do artigo é estimar a prevalência de Transtornos mentais comuns entre estudantes de Medicina durante a pandemia da Covid-19, analisando seus principais determinantes nos âmbitos acadêmico, social e econômico.

b) Qual a metodologia usada para a coleta dos dados? (1,0)

Espera-se que o (a) candidato (a) entenda que trata-se de um estudo transversal, realizado com 388 estudantes de Medicina em Salvador, na Bahia. Por meio da plataforma Google Forms, coletaram-se dados sociodemográficos e acadêmicos, sobre hábitos de vida, comorbidades e sintomas de transtornos não psicóticos mensurados pelo questionário.

Questão 02

De acordo com o texto, responda às seguintes questões:

a) Quais são os resultados da pesquisa? (1,0)

Espera-se que o (a) candidato (a) afirme que a prevalência de transtornos mentais comuns (TMC) foi de 39,7% entre os estudantes de Medicina, sendo de 47,4% no ciclo básico, 40,3% no ciclo clínico e 12,3% no internato. Entre os fatores associados ao surgimento de TMC, estão sedentarismo, tabagismo, uso de substâncias que favoreçam o desempenho acadêmico, insatisfação com o próprio rendimento acadêmico, má qualidade de sono, falta de apetite, cefaleia frequente, má digestão, ideação suicida e tristeza.

b) Quais conclusões a pesquisa chegou? (1,0)

Espera-se que o (a) candidato (a) infira que que durante a pandemia de Covid-19, ocorreu uma expressiva prevalência de transtornos mentais comuns entre os alunos de medicina do sexo feminino, brancos, solteiros, que residiam com familiares e não possuíam renda própria. Os dados parece colaborar com a literatura corrente que evidencia o curso de Medicina como o principal fator de risco para TMC.

Questão 03

De acordo com o texto, responda às seguintes questões:

a) Quais fatores levaram ao aumento exponencial na estatísticas de sintomas mentais no período da pandemia de Covid-19? (1,0)

Espera-se que o (a) candidato (a) compreenda que fatores como mudanças repentinas na rotinas dos estudantes em decorrências das aulas remotas, a rápida disseminação do vírus, o medo de ser infectado e a possibilidade de doenças fatais.

b) Qual foi o contexto do desenvolvimento da pesquisa? (1,0)

Espera-se que o (a) candidato (a) entenda que a pesquisa foi realizada com alunos de medicina com mais de 18 anos, regularmente matriculado em instituições superiores na cidade de Salvador, entre julho e outubro de 2020.

Questão 04

a) Como foi estruturado o questionário para a pesquisa? (2,0)

Espera-se que o (a) candidato (a) compreenda que o questionário foi composto por 24 questões de múltipla escolha que abrangiam aspectos sociodemográficos (idade, sexo, etnia, estado civil, grau de envolvimento religioso, condições socioeconômicas), dados acadêmicos (instituição, período do curso e satisfação com o desempenho acadêmico), hábitos de vida (atividades de lazer, atividade

física, tempo de sono, consumo de substâncias como álcool, produtos do tabaco e psicoestimulantes) e comorbidades.

Questão 05

De acordo com o texto, responda às seguintes questões:

a) Como foi análise dos dados do estudo? (2,0)

Espera-se que o (a) candidato (a) infira que a análise se deu por meio do software estatístico IBM SPSS, versão 26.0. Frequência e porcentagem foram utilizadas para a análise das variáveis categóricas; média aritmética e desvio padrão para variáveis numéricas com distribuição normal; mediana e intervalo interquartil para dados numéricos com distribuição assimétrica. As associações estatísticas foram realizadas utilizando-se o Teste de Kruskal-Wallis para variáveis contínuas e o Teste Qui-Quadrado para variáveis categóricas. O Risco Relativo (RR) e o Odds ratio (OR) foram calculados considerando o intervalo de confiança de 95%. Para analisar a relação entre as variáveis, foram medidos os coeficientes de contingência. A dependência entre as variáveis foi classificada como fraca (de 0 a 0,29), moderada (de 0,3 a 0,69) ou forte (acima de 0,7). Valores de $p < 0,05$ foram considerados estatisticamente significantes.