http://dx.doi.org/10.35630/2199-885X/2021/11/5.3

PREVALENCE OF BURNOUT IN MEDICAL STUDENTS IN ROMANIA DURING COVID-19 PANDEMIC RESTRICTIONS (PRELIMINARY DATA)

Received 20 August 2021;
Received in revised form 14 September 2021;
Accepted 16 September 2021

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ABSTRACT — Medical student burnout can cause emotional exhaustion and detachment from educational objectives. The objectives of this study were to evaluate burnout using the Maslach Burnout Inventory-General Survey for Students (MBI-GS(S)) associated with online education and pandemic restrictions.
METHODS: The MBI-GS (S) was administered to final-year medical students at Romania's most prominent medical faculties from June to July 2021. Descriptive statistics and the internal consistency of the MBI-GS (S) were assessed. In addition, mean MBI-SG (S) subscale scores for burnout were calculated for cynicism (CY), emotional exhaustion (EE), and academic efficacy (AE).
RESULTS: 50 medical students completed the online survey, and 42% reported self-perceived burnout. The MBI-GS(S) subscale scores were higher for cynicism (CY) (52%) and low professional efficacy (PE) (60%), and almost half of the students (48%) reported emotional exhaustion (EE).
CONCLUSIONS: Recent studies have found strong associations between burnout in medical students and disappointment in their studies, fear of inadequate professional training, not having necessary skills to enter medical practice, being less than satisfied with the educational system and social support, optimism, and motivation in pursuing a medical career. We suggest the continuation of burnout studies to overcome the limitations of a cross-sectional research design. In addition, measuring burnout in the medical student population could be extended to all study years and how adequate educational strategies and wellness initiatives could ameliorate burnout.

KEYWORDS — burnout, medical students, well-being, Maslach Burnout Inventory.

INTRODUCTION

The study aimed to identify burnout in final year medical students associated with online education during the COVID-19 pandemic in Romania. With the distancing measures imposed in the COVID-19 pandemic, the restrictions have affected university courses unprecedentedly, regardless of discipline (Luca et al., 2020). If for specific student populations the impact on studies has been lower, for medical students, the transition effects, even temporarily, in the digital education paradigm are under continuous evaluation. Lockdown, quarantine measures, and social distancing adversely affect the general population's mental health and student population. Recent studies suggest that the manifestations of anxiety, depression, and stress have increased significantly since the introduction of drastic health security measures worldwide (Baroiu et al., 2021; Grigoras & Ciubara, 2021). However, as the recent epidemiological data show, the situation is far from being controlled globally or nationally, which suggests that the risk of burnout and educational stress is still very much present, and its long-term consequences are still impossible to assess correctly. Thus, the need to continue studies in a longitudinal design on the population of medical students is evident. Moreover, a cross-sectional study considering a level of baseline burnout is needed to assess the risks and consequences of burnout and associated stress in the medium and long term.

CONCEPTUAL FRAMEWORK

According to the literature, a quantitative study is suitable for mapping trends in stress and burnout depending on the year of study in medical training. Thus, a longitudinal study could represent the continuation of this research, with a significant impact on the assessment and prevention of difficulties associated with poor mental health in medical students and the inventory of possible directions for intervention.

Burnout is gaining more and more attention in educational research. It also plays a significant role in the overall well-being of medical students and has severe implications during the residency period and later. Previous research has shown an increase in burnout after initiating clinical practice in which students face patients, illness, and death (Ishak et al., 2013). In addition, medical students have an increased risk of depression and suicidal ideation (Rotenstein et al., 2016). A cross-sectional study, which included students from seven medical schools, showed that students who face exhaustion are up to three times more likely to have had suicidal ideation in the past. The severity of

burnout is also strongly associated with suicidal ideation, and this association persists after it has adapted to depression in the same population (Dyrbye et al., 2008). Due to the COVID-19 pandemic, most countries around the world have taken extreme measures. Quarantine has been used for centuries to limit the spread of infection by isolating infected or possibly infected populations. Universities have suspended their activities, and education continued online. However, quarantine and social distancing have already had detrimental effects on people's mental health, as depression, anxiety, and stress symptoms have increased dramatically (Ozamiz-Etxebarria et al., 2020).

Thus, studies show that highlighting risk situations by assessing the medical student population is the first step in controlling burnout. Fortunately, the literature suggests that students can recover from this condition by assessing burnout symptoms, and suicidal ideation, if present, is remitted. However, the study by Jordan et al. indicates several reasons why medical studies, unlike in any other field, influence students' mental health. In addition to the implicit rigor imposed by medical studies, the current curricular format, researchers also note expectations that students are "strong" enough to cope with stress to succeed and insufficient attention to mental health compared to physical health. Studies show (Aebischer et al., 2020) that burnout costs are professional or academic and personal - illness, hopelessness, irritability, impatience, poor interpersonal relationships, both with family members and other students, or substance abuse.

The COVID-19 pandemic, according to all current estimates, will continue and develop new facets in affecting the mental status of the general population, health workers, and medical students. Thus, medical education will have to adapt to the context, and digital education in medicine, teaching, and clinical practice will be an ongoing challenge for medical institutions. In addition, a longitudinal study can provide more information on burnout scores in the student population, monitored throughout all years of study, as the pandemic situation varies, as Žuljević et al. (2021) suggest. Other studies also suggest that this phenomenon of digital education in medicine will develop regardless of the epidemiological situation, having many advantages for students (access to resources, simulations, learning efficiency). On the other hand, online studies also have limitations related to students' mental health (stress and burnout). However, there is no consensus on digital medical education, so the situation is still under evaluation, and the advantages and disadvantages of online education are still under discussion.

Every student, educator, and every study situation is particular. Therefore, it is impossible to discuss a predominant adoption of education in the virtual space for medical studies. Nevertheless, medical education differs from other study contexts firstly by duration and secondly by the need to expose students to the clinical contexts, life, and real suffering of actual patients and professional contexts arising from the specifics of the health system they will practice upon the completion of their studies.

METHODS

A cross-sectional survey of medical students (MSs) was conducted with a custom-designed Maslach Burnout Inventory General Survey for Students (MBI-GS(S)) to evaluate the prevalence of burnout (Schaufeli et al., 1996).

Fifty medical students (N=50) final study year from leading medical schools in Romania participated in the study through an online questionnaire and informed consent. We used Maslach Burnout Inventory General Survey for Students (MBI-GS(S)) to evaluate the three-dimensional presence of burnout on subscale scores calculated for cynicism (CY), emotional exhaustion (EE), and Low Professional Efficacy (PE). Data were analysed using IBM SPSS Statistics 26 software. The statistical approach addressed the two aspects of descriptive and analytical statistics. Descriptive statistics took into account the classification and synthesis of the obtained data, together with specific statistical indicators that express characteristics and trends of the studied parameter.

Cronbach's alpha was used to calculate the internal consistency of all MBI-SS items and subscales. Reliability scores of ≥0.5 were considered acceptable, with higher scores indicating greater internal consistency (Taber, 2018) (Table1).

RESULTS

A total of 50 (N=50) medical students, 36 (72%) female students, with a median (range) age of 24 (23–46), were studied. A total of 24 (48%) of the students present medium and high levels of emotional exhaustion, 26 (52%) present medium and high levels of cynicism, and 30 (60%) students present low professional efficacy. Furthermore, as defined by MBI-GS(S) instrument, 42% of the students show burnout characteristics, as per analysed data. In total, more than two out of five students show burnout symptoms during the pandemic, also related to educational concerns. In addition, the dimensions analysed show significant depersonalization scores, which suggests a detachment from the significance and usefulness of studies and the tendency to become less involved and enthusiastic. One possible explanation offered by similar studies (Zis et al., 2021) is that one of the prerequisites for

Table1. *Descriptive statistics and internal consistency for MBI-GS(S) items (N=50)*

	Scores				Cronbach's Alpha
	Mean ± SD	Range	Q25	Q75	
EE	17.08 ± 9.65	0.00 – 30.00	7.00	27.00	.959
CY	14.04 ± 8.29	2.00 – 30.00	7.00	27.00	.851
PE	21.90 ± 8.59	0.00 – 35.00	19.00	27.00	.856

medical education is access to clinical training, which cannot be transmitted through courses or digitally stored information.

Internal reliability (Cronbach's alpha) coefficients of the MBI-GS (S) subscales (EE, CY, PE) can be found in Table 1. The minimum acceptable value for reliability coefficient was 0.5, with values greater than 0.75 being preferable (Taber, 2018) (Table 1).

DISCUSSIONS

With the distancing measures imposed in the COVID-19 pandemic, the restrictions have affected university courses unprecedentedly, regardless of discipline. If for specific student populations the impact on studies has been lower, for medical students, the transition effects, even temporarily, in the digital education paradigm are under continuous evaluation. Preliminary data show variations in levels of stress, burnout, and resilience over the years of study in medicine and that these values are predictors of the mental health of future doctors. Therefore, burnout prevalence in medical students is of strategic importance for how medical education will continue in Romania, and identifying the most appropriate lines of intervention for the mental health of medical students is imperative.

Further analysis and studies are needed to identify trends and variations in factors that affect the well-being of medical students. However, appropriate interventions will contribute to better academic performance, more psychological stability, and a higher sense of accomplishment, mitigating the risks of stress, anxiety, depression, and burnout.

Acknowledgment

This research was presented at 5th European Conference of Psychiatry and Mental Health "Galatia" 2021.

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