#### BURNOUT PHENOMENON IN MEDICAL STUDENTS

Resti Rahmadika Akbar\*<sup>1</sup>, Nurul Afifa<sup>2</sup>, Nabila Az Zahrah<sup>2</sup>

\*1,2,3Universitas Baiturrahmah, Indonesia

Email: restirahmadikaakbar@gmail.com

### Abstract

Burnout is a condition characterized by physical and mental fatigue, and increased negative feelings or cynicism, decreased effectiveness in doing something and often assuming that they are incompetent. The academic environment of medical schools can be one of the stressors experienced by some students. If stress occurs for a long time and is not balanced with the right coping strategies, then the student can experience academic burnout. Factors that cause burnout can come from both individuals and situations. Heavy academic burdens cause medical students to be at higher risk of experiencing academic burnout when compared to the general population. Students who experience burnout experience extraordinary fatigue both physically and mentally, causing reluctance to interact with others, difficulty concentrating on studying, loss of motivation, reduced sleep quality and interest in attending lectures and activities and causing a feeling of incompetence which will have a negative impact on students both physically, mentally and academically. The worst possibility that can happen is that medical students choose not to continue their education, take leave, even drop out, even to the point of having thoughts of suicide. So that understanding and handling these various aspects, both from an individual and situational perspective, are expected to help prevent and overcome burnout to improve the welfare of medical students.

**Keywords:** Burnout, burnout factors, medical students

## INTRODUCTION

The phenomenon of burnout in medical students is an issue that is increasingly receiving attention among academics and health education practitioners. Medical students experience various stages of transition, one of which is the transition from preclinical to clinical education which provides challenges and pressures and causes stress for students. If students do not have good coping mechanisms, distress will occur which causes depression, burnout, and anxiety. <sup>1,2</sup> Burnout is a pathological syndrome that occurs due to prolonged stress and can cause physical and emotional exhaustion which ultimately causes maladaptive behavior in sufferers. Maladaptive behavior in burnout sufferers can be in the form of loss of motivation and strained relationships with other individuals, in addition to a decrease in achievement due to feelings of incompetence or uselessness experienced by sufferers. In the context of medical students, high workload, academic pressure, and emotional demands can cause significant burnout symptoms.<sup>3-5</sup>

Medical students often face unique challenges that can increase the risk of burnout. Heavy academic workload, clinical practice, and social responsibility towards patients can create a stressful atmosphere. In addition, intense competition in the medical world, long-term workload, and lack of social support can be contributing factors to the emergence of burnout. Burnout in medical students can occur due to various complex factors and the intensity of demands in the medical



education environment.<sup>2,6</sup>

The causes of burnout can come from situational factors and individual factors. Situational factors include demands from a task, while individual factors can be socio-economic conditions and aspects that shape a person's personality. The academic demands of students can be categorized as situational factors. Students have their own demands that are influenced by institutional regulations and policies.<sup>7,8</sup>

Some factors that can cause burnout in medical students Loss of motivation to study, disturbed sleep quality, lack of social support, stress, learning environment, high academic load, intense competition, emotional demands plus the COVID-19 pandemic has provided additional challenges for medical students and can be a factor that worsens the level of burnout because it involves significant changes in the environment and learning methods. The combination of these factors can create a very heavy burden for medical students, leading to chronic stress, exhaustion, and ultimately burnout. Therefore, special attention to mental well-being and adequate support in the medical education environment is needed. 9-11

Burnout in medical students during the pandemic has a long-term impact not only on individual well-being but also on the quality of future patient care. To address this challenge, the purpose of this literature review is to identify factors that exacerbate burnout and develop appropriate support strategies. By identifying and analyzing these factors, we hope to mitigate the adverse effects of burnout by Involving medical students in decision-making, providing mental health resources, and increasing flexibility in the medical education system can help reduce the risk of burnout and prevent burnout in medical students. <sup>3–5,7,11</sup>

# LITERATURE REVIEW

# **Definition**

Burn out is a condition where a person feels physical, emotional and mental exhaustion as a result of a situation full of emotional demands over a long period of time. According to Pines and Aranson "burnout will make the sufferer feel very physically and emotionally exhausted". "Meanwhile, according to Namora, "burnout is a condition of a person characterized by decreased productivity due to continuous stress" Taufik, T., & Ifdil, I. also explained that "excessive learning activities have an impact on this condition which will trigger stress in students, from a long time its effect on learning". In other words, Burnout is an emotional condition where a person feels helpless, has no hope and is even mentally or physically bored as a result of increasing work demands or prolonged excessive stress. Burnout in students refers to emotional exhaustion caused by learning demands, having cynical behavior, feelings of failure to achieve goals, and feeling like an incompetent student. 12-14

# **Burnout factors**

Factors that can cause or worsen burnout can vary and are often complex and interrelated. Burnout in medical students can occur due to various complex factors and the intensity of demands in the medical education environment. Factors that



can cause burnout in medical students are high academic stress, competitive educational environment stress, educational curriculum factors, lack of sleep, student age and student personality type characteristics. In general, there are two factors that cause burnout, namely: (1) situational factors, including job characteristics, type of work, and organizational characteristics and (2) individual factors consisting of demographic characteristics, personality characteristics, and attitudes towards work plus the COVID-19 pandemic has presented additional challenges for medical students and can be a factor that worsens the level of burnout because it involves significant changes in the environment and learning methods. The combination of these factors can create a very heavy burden for medical students, causing chronic stress, fatigue, and ultimately burnout. <sup>9,15</sup>

### **Individual factors**

Individual factors that can contribute to burnout in medical students involve a person's characteristics and attitudes in dealing with burnout. Several individual factors that can affect the level of burnout in medical students.<sup>7,16</sup>

### a) Stress Perception and Coping Strategies

The way students identify and respond to stress can affect the level of burnout. Less effective coping strategies, such as avoiding or feeling helpless, can increase the risk of burnout. 8,12,16

## b) Perfectionist Attitude

Students who have high levels of perfectionism and set difficult standards for themselves can cause disappointment and excessive stress for themselves. 10,17

### c) Emotional Intelligence:

Emotional intelligence is the ability to monitor one's own and others' feelings, distinguish them, and use them as a guide in thinking and acting. In a doctor, a profession that is bound by human interaction, emotional intelligence is an important thing to have by understanding and managing emotions can affect the way students respond to stress and pressure. 3,6,8,10,18

## d) Time Management Skills in Studying:

One of the factors that influence academic burnout is the ability of students to set priorities for studying and completing their assignments. In today's digital era, students' arrangements for the learning process and completing their assignments are often disrupted by the use of gadgets. Although gadgets can help the process of communication and information search, the use of gadgets with excessive duration and intensity can certainly disrupt students' daily activities. The ability to manage time efficiently and effectively can help prevent excessive burnout. 5,11,19

# e) Adaptability and Resilience:

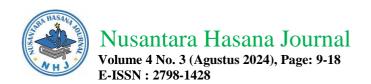
The ability to adapt to change and uncertainty, and Individual control over a difficult situation is related to the individual's ability to remain stable even in the midst of problems, individual control over difficult situations is related to resilience skills can affect burnout levels.<sup>7,11,20</sup>

# f.) Interaction with Fellow Students and Effective Communication:

Students who can build and maintain good social relationships with other students may be more resilient to academic and emotional stress and the ability to manage conflict well and communicate effectively can help reduce interpersonal stress levels. 6,20,21

### g) The importance of self-love:

The ability to take care of yourself, both physically and mentally, can help prevent



burnout.6,20,22

h) Self-Efficacy: High self-confidence in the ability to handle tasks and challenges in medical education can protect against burnout. Academic self-efficacy affects overall academic achievement and outcomes and serves as an important predictor of student success in science. Medical students are one of the students who study science so that academic self-efficacy is an important predictor for the learning process. However, unexpected and ongoing stressful situations due to the pandemic can reduce the level of academic self-efficacy among health. Self-efficacy in the academic field is referred to as academic self-efficacy. Academic self-efficacy is the belief that an individual has that the individual can complete the tasks that are the demands of his/her academics well.<sup>3,6,19</sup>

Understanding these individual factors can help medical students develop more effective coping strategies and maintain their well-being during challenging medical studies.<sup>6,13,18,23</sup>

#### Situational factors

In addition to individual factors, factors that are no less important in triggering burnout are situational factors. Situational factors, or factors related to the environment and situations where medical students study, can also contribute to burnout. Some situational factors that can affect the level of burnout in medical students.<sup>4,11,24</sup>

# a) High Academic Demands:

A dense curriculum and high academic demands can create additional pressure on medical students. Workload (study load), a study load that exceeds the individual's threshold, causing fatigue both emotionally and physically.<sup>5,10,25</sup>

## b) Covid-19 Pandemic and Online Learning:

The Covid-19 pandemic has resulted in direct teaching and learning activities having to be postponed and switched to an online learning system. This is certainly not easy for students and lecturers as well as academic administrators in implementing this system. As we know, not all students have the same abilities and not all teachers understand how to use online facilities as a learning medium. As a result, many students begin to feel stressed by the many assignments given without paying attention to the cognitive, affective and psychomotor domains of students. The Covid-19 pandemic also requires them to stare at computer screens for hours and try to find motivation to learn. <sup>7,9,15,18</sup>

This has the potential to significantly affect the mental health of students and can cause psychological trauma that makes them demotivated in learning. Thus resulting in prolonged academic stress. Academic stress in the long term and continuously has a negative impact that can cause changes in motivation and give rise to burnout syndrome. <sup>9,15</sup>

# c) Technological Growth and Changes in Medical Practice:

Rapid changes in medical technology and medical practice can create pressure and the need to learn continuously, this can trigger feelings of stress and fatigue with technology that develops rapidly over time, this requires students not only to learn about Practice but also how to use the technology properly.<sup>7,16,17</sup>

# d) Inequality and Discrimination:

Inequality or experiences of discrimination in the campus or clinical environment can stimulate feelings of discomfort and increase the risk of burnout. Academic burnout can occur if there is no good relationship between students or between students and the academic environment. 18,23

# e) Learning Environment

A learning environment that cannot facilitate a person's needs will reduce the enthusiasm and energy of students, resulting in negative consequences such as absenteeism, decreased academic performance, mental disorders and anxiety. This condition results in a gap between the demands given and the resources available, which can lead to burnout. Dissatisfaction with one aspect of the learning environment is related to burnout in students. The learning environment is important because a poor learning environment will be a stressor for students. Stress experienced continuously will lead to burnout. <sup>8,15,25</sup>

## f) Pressure from Social and Family Life

Medical students may face additional pressure from social and family life, such as family expectations or other responsibilities outside of study. Students who experience academic burnout are partly caused by the lack of social support from those around them, therefore social support needs to be increased to minimize the risk of burnout effects. Prevent academic burnout in medical students during the Covid-19 pandemic can be done from external things that are given, namely attention and social support from family, academic institutions, society, and government institutions. <sup>20,22</sup>

Understanding and identifying these situational factors can help medical education institutions in designing strategies to create a supportive environment and reduce the risk of burnout in medical students.<sup>6,20,21</sup>

## **Consequences**

Burnout has a negative impact on medical students because it will affect the physical, mental, and academic health of medical students, students who experience burnout will feel incompetent so that they lose interest in learning so that burnout can have a negative impact on students such as academic dishonesty, disrupted academic performance, burnout can encourage cheating and dishonest behavior. Students who experience burnout can engage in dishonest behavior such as copying answers from other students or notes when taking exams. Burnout can also result in decreased concentration in learning, lack of sleep quality which will then reduce academic performance. Burnout can also cause students to drop out of medical school, take leave, and even have thoughts of suicide. The magnitude of the dangers that can be caused makes burnout important to control. <sup>5,11,19</sup>

Burnout is associated with general stress, poor educational performance, dropout, suicidal ideation and drug use, especially during medical education. Although depression and burnout overlap, the strength of the correlation between the two is not fully understood. Symptoms of work stress and anxiety can be directly related to burnout, meaning that the higher the stress and anxiety, the higher the level of burnout. Dropout has a variety of negative impacts on individuals, families, faculty, and society. For example, dropout intentions are related to unmet individual expectations, symptoms of loss and frustration, and financial costs. The European Commission Education and Training Monitor 2020 showed that 10.2% of early graduates from education and training dropped out before completing their education. Previous research has found that 11% of medical students have serious thoughts about dropping out of medicine each year. In the US, suicide is the second

leading cause of death for resident trainees and around 10 out of 100 medical students report suicidal thoughts.<sup>3–5,19,21</sup>

Burnout is clearly detrimental because it will reduce the ability and effectiveness of the work of prospective doctors. In addition to affecting the physical and mental health of students, Burnout can also have a negative impact where it can affect the work and the workers themselves, such as reluctance to go to work, feelings of failure, anger and resentment, feelings of guilt and tending to blame, discouragement and ignorance, negativism, isolating and withdrawing, feeling tired and exhausted every day, extreme fatigue after work, losing positive feelings towards patients, after the period of contact with patients ends, refusing calls from patients, inability to concentrate or listen to what patients say, feeling paralyzed, cynical towards patients, being blaming, and rigid in thinking and persisting in not changing.<sup>26</sup>

## Characteristics of Burnout

There is a surprising fact that all burnout sufferers were initially enthusiastic people. Burnout sufferers are people who are enthusiastic, energetic, ambitious, and have strong principles not to fail and are hard-working figures. Characteristics of burnout are headaches, nausea, insomnia, fever, back pain, tension in the neck and shoulder muscles, frequent flu, insomnia, chronic fatigue and lack of appetite. Emotional fatigue is characterized by depression, feelings of helplessness, feeling trapped in one's work, boredom, cynicism, anger, anxiety, despair, sadness, depression, helplessness, and irritability. Mental fatigue, characterized by being cynical towards others, being negative towards others, negative attitudes towards others, low self-concept, despair with the way of life, feeling worthless, tending to harm oneself, work, organization and life in general. Low self-esteem, characterized by never being satisfied with one's own work results, feeling never doing something satisfying. <sup>2–4,20,21,24</sup>

## Prevention

Burnout is a serious matter so we must take preventive measures. Preventing burnout in medical students involves a series of strategies that can help manage stress, improve well-being, and build mental resilience and also added that the current COVID-19 pandemic has made the prevalence of anxiety levels experienced by students due to the 2019 Corona Virus outbreak (COVID-19) around 24.9%. So that efforts made to prevent burnout are expected to reduce the risk of burnout, efforts to prevent burnout in medical students are divided into two, namely internal and external prevention, including.<sup>7,9,15</sup>

# Internal

### a. Lifestyle and health behavior

A study shows that demographic factors, lifestyle, and certain behaviors affect the level of burnout components in medical students. Examples of certain lifestyles and behaviors that are at risk of burnout in medical students include smoking and alcohol consumption. Student smokers (active) have significantly higher levels of emotional exhaustion (EE) than students who do not smoke or are former smokers. Meanwhile, the habit of consuming alcohol significantly affects the degree of decline in personal accomplishment (low personal accomplishment/PA). <sup>10,11,19</sup>

## b. Reducing excessive academic activity

A study on "Behavior and burnout in medical students" at Andrews and Manchester Universities, England, stated that high levels of activity significantly affect the

incidence of depersonalization (DP) in medical students. This occurs due to the many assignments and learning activities in medical lectures, so that busying oneself has an impact on the surrounding social environment decreasing (Depersonalization).<sup>2,3,21</sup>

## c. Increasing learning motivation

Considering the large number of curricula that must be completed with a fairly large study load, this is very important for medical students to prevent burnout. Many factors influence learning motivation. Personally, learning motivation is built by each individual who directs and encourages themselves to start or act on something. 4,6,20

## d. Increasing self-resilience

There are four aspects of self-resilience, namely the will and determination of goals (determination), endurance (endurance), adaptability (adaptability), and healing (recuperability). This is significantly related to preventing burnout in medical students. <sup>2,3,6</sup>

### **External**

# a. Social attention and support.

Students need attention, assistance, and social support from the community, family, and universities. This significantly affects students' mental health. When social support is obtained negatively from the social environment, it will correlate with student anxiety.<sup>6,11</sup>

# b. Cooperation between government institutions and academic institutions

In order to provide facilities and infrastructure for psychological treatment in a timely and high-quality manner. So that it is oriented towards developing strong learning motivation. This is expected to be able to prevent or minimize the occurrence of burnout syndrome which has an impact on someone to engage in maladaptive behavior. 1,4,19

### c. Mental Health and Well-Being Programs

Providing mental health and well-being programs for students, such as coping skills training sessions, mental health seminars, or easy access to counseling services, Organizing stress management and health promotion programs that involve physical activity, yoga, or meditation. This can help students develop strategies to relieve stress, and Ensuring a healthy balance between academic activities and clinical practice. Students need to have enough time to absorb and understand the material, while still having time to rest and recover. <sup>19,23</sup>

In addition to the above factors, efforts to prevent academic stress in medical students can also be supported by government policies as stated in the Circular Letter of the Ministry of Education and Culture No. 04 of 2020 concerning the Implementation of Education during the Corona Virus Disease (Covid-19) Emergency, which contains: (1) "Studying at home through online/distance learning is implemented to provide meaningful learning experiences for students without being burdened by the demands of completing curriculum achievements for class promotion or graduation." (2) "Evidence or products of learning activities from home are given qualitative and useful feedback without having to give quantitative scores/values." (3) "Learning activities and tasks from home can vary according to interests and conditions, including considering gaps in access or learning facilities." <sup>9,15,17,23</sup> Researchers also provide advice to parents to be able to understand the sources of problems that can cause burnout in students so that they

can reduce all forms of actions that may make students feel stressed in the family environment, parents are expected to be a source of social support for students, parents and other family members are able to maintain and increase the support given to students so that the level of burnout remains at a low level, for example by providing information that students need regarding the condition of their studies, or meeting the needs of students during their studies. Suggestions for students are expected to understand the source of the problem that causes burnout so that they can immediately overcome the problem appropriately, students are expected to maintain their resilience skills so that they can recover from various stressful situations and avoid burnout, students are expected to maintain and increase social support given to fellow students, especially to individuals who are in stressful situations, students with low levels of burnout are expected to be able to maintain their condition by increasing their resilience skills and social support around them, so that students are expected to be able to carry out their lecture activities well. 17,18,25

### **CONCLUSIONS & RECOMMENDATIONS**

Burnout in medical students is a serious issue that often occurs. Burnout is prolonged stress and fatigue caused by doing a job repeatedly. Burnout does not just happen, there are factors that cause burnout including internal factors and situational factors. Students who experience burnout experience extreme fatigue both physically and mentally, causing reluctance to interact with others, difficulty concentrating and studying, loss of motivation and interest in attending lectures and activities, and causing a feeling of incompetence that will have a negative impact on students both physically, mentally and academically. The worst possibility is that it can cause students to drop out of medical school (drop out), take leave, and even have thoughts of suicide. So that understanding and handling these various aspects, both from an individual and situational perspective, are expected to help prevent and overcome burnout to improve the welfare of medical students.

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