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## Systematic Review Provides Evidence That Anxiety and Negative Thoughts are Prevalent among Medical Students in Malaysia

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### Abstract

**Introduction:** Medical education is a challenging and demanding field that requires rigorous academic study, practical experience, and intense emotional investment. This intense environment can contribute to anxiety and negative thinking among medical students. This systematic review aims to explore the prevalence and impact of anxiety and negative thoughts on medical students in Malaysia. A comprehensive search was conducted on electronic databases including PubMed, Scopus, and Google Scholar. The search keywords included "anxiety", "negative thoughts", "medical students", and "Malaysia". The inclusion criteria were articles written in English and published between 2010 and 2022, reporting on the prevalence and impact of anxiety and negative thoughts on medical students in Malaysia. A total of 12 articles met the inclusion criteria and were included in this systematic review. The studies reported a high prevalence of anxiety and negative thoughts among medical students in Malaysia. The prevalence of anxiety ranged from 20% to 70%, while negative thoughts ranged from 25% to 70%. Factors contributing to anxiety and negative thoughts included academic pressure, workload, clinical training, and lack of social support. The impact of anxiety and negative thoughts on medical students included academic underperformance, decreased quality of life, and mental health disorders. This systematic review provides evidence that anxiety and negative thoughts are prevalent among medical students in Malaysia and have a significant impact on their academic performance, quality of life, and mental health. Therefore, it is crucial to implement interventions that address the underlying causes of anxiety and negative thoughts and provide social support to medical students. Further research is needed to develop and evaluate effective interventions for managing anxiety and negative thoughts among medical students in Malaysia.

**Keywords:** Distress, Anxiety Symptoms, Depressive Symptoms

### Introduction

Medical education is widely recognized as a challenging and demanding field that requires rigorous academic study, practical experience, and intense emotional investment (Stewart *et al.*, 2019; Youssef & Evers, 2014). However, the nature of medical education can also

contribute to the development of negative thinking and anxiety among medical students (Dyrbye *et al.*, 2010). This can have a significant impact on the overall mental health and well-being of medical students, leading to decreased academic performance, burnout, and even attrition (Dyrbye *et al.*, 2006; Rotenstein *et al.*, 2016).

In Malaysia, the issue of anxiety and negative thinking among medical students is of particular concern due to the unique cultural, social, and academic factors that contribute to this phenomenon. According to a study by Ibrahim *et al.* (2018), Malaysian medical students experience high levels of stress and anxiety due to factors such as academic workload, financial pressures, and competition for residency positions. Additionally, cultural and social expectations regarding academic achievement and career success can further contribute to the development of negative thinking and anxiety among medical students (Chew-Graham *et al.*, 2003). Several studies have shown the effectiveness of interventions such as stress management programs, mindfulness-based interventions, and social support in reducing anxiety and improving the mental health of medical students (Chandavarkar *et al.*, 2012; Shihata *et al.*, 2020; Yusoff *et al.*, 2013). One study conducted in Malaysia evaluated the effectiveness of a stress management program among medical students and found a significant reduction in anxiety, depression, and stress levels after the intervention (Yusoff *et al.*, 2013). Another study conducted in Saudi Arabia found that a mindfulness-based intervention was effective in reducing stress and improving the well-being of medical students (Chandavarkar *et al.*, 2012). Furthermore, social support from family, peers, and healthcare professionals has been shown to be an effective intervention in managing anxiety and negative thoughts among medical students (Huang *et al.*, 2019; Yusoff *et al.*, 2013). Given the significant impact of anxiety and negative thinking on the well-being and success of medical students, it is essential to explore the prevalence and impact of these phenomena in Malaysia. Therefore, this systematic review aims to synthesize existing research on the prevalence and impact of anxiety and negative thinking among medical students in Malaysia. By analyzing and synthesizing this literature, this review seeks to provide a comprehensive understanding of the factors that contribute to anxiety and negative thinking among medical students in Malaysia, as well as the implications of these phenomena for medical education in the country.

### **Importance of the topic why this area is to be studied and what is the need of it**

The study of anxiety and negative thoughts among medical students in Malaysia is important and beneficial for several reasons. Firstly, medical students are at a high risk of experiencing mental health problems due to the demands and stresses of their academic and clinical training (Dyrbye *et al.*, 2006). Secondly, anxiety and negative thoughts can have a significant impact on the academic performance, quality of life, and mental health of medical students (Dahlin *et al.*, 2005; Huang *et al.*, 2019). These negative emotions can result in poor academic performance, reduced quality of life, and even mental health disorders such as depression and burnout (Abdulghani *et al.*, 2014).

The study of anxiety and negative thoughts among medical students is a crucial area of research due to its significant impact on their academic performance, quality of life, and mental health. Medical education is a highly stressful and competitive environment that can lead to the development of anxiety and negative thoughts among students (Dyrbye *et al.*, 2006). These negative emotions can result in poor academic performance, reduced quality of life, and even mental health disorders such as depression and burnout (Abdulghani *et al.*, 2014).

Moreover, medical students are the future healthcare providers who will be responsible for the well-being and care of millions of patients. Therefore, their own mental health and well-being are essential to ensure that they can provide the best care possible (Yusoff *et al.*, 2013). This highlights the need to address the prevalence of anxiety and negative thoughts among medical students to ensure that they can function effectively as healthcare providers. Research has shown that medical students in Malaysia also face similar challenges, and the prevalence of anxiety and negative thoughts among them is high (Yusoff *et al.*, 2013). Therefore, understanding the underlying causes of anxiety and negative thoughts among medical students in Malaysia and developing effective interventions is crucial to promote their mental health and well-being.

In summary, studying anxiety and negative thoughts among medical students is essential as it has significant implications for their academic performance, quality of life, and mental health. Addressing these issues is crucial to ensure that medical students can function effectively as healthcare providers and provide the best care possible to patients. Understanding the prevalence and impact of anxiety and negative thoughts among medical students can help educators and healthcare professionals develop and implement interventions that address these issues and improve the mental health and well-being of medical students. Furthermore, addressing the mental health needs of medical students is essential for producing competent and compassionate healthcare professionals who can provide quality care to their patients (Yusoff *et al.*, 2013). Significance of the study, how and whom the study of this topic is important and beneficial. The findings of this systematic review are particularly relevant to policymakers, medical educators, and healthcare professionals in Malaysia who are responsible for the well-being and training of medical students. By providing evidence of the high prevalence of anxiety and negative thoughts among medical students and their impact on academic performance, quality of life, and mental health, this study can inform the development of policies and programs that support the mental health and well-being of medical students.

The study of anxiety and negative thoughts among medical students in Malaysia is important and beneficial for several reasons. Firstly, medical students are at a high risk of experiencing mental health problems due to the demands and stresses of their academic and clinical training (Dyrbye *et al.*, 2006). Secondly, anxiety and negative thoughts can have a significant impact on the academic performance, quality of life, and mental health of medical students (Abdulghani *et al.*, 2014; Dahlin *et al.*, 2005; Huang *et al.*, 2019).

Understanding the prevalence and impact of anxiety and negative thoughts among medical students can help educators and healthcare professionals develop and implement interventions that address these issues and improve the mental health and well-being of medical students. Furthermore, addressing the mental health needs of medical students is essential for producing competent and compassionate healthcare professionals who can provide quality care to their patients (Yusoff *et al.*, 2013).

The findings of this systematic review are particularly relevant to policymakers, medical educators, and healthcare professionals in Malaysia who are responsible for the well-being and training of medical students. By providing evidence of the high prevalence of anxiety and negative thoughts among medical students and their impact on academic performance, quality of life, and mental health, this study can inform the development of policies and programs that support the mental health and well-being of medical students. In conclusion, the study of anxiety and negative thoughts among medical students in Malaysia is important and beneficial for improving the mental health and well-being of medical students, producing

competent and compassionate healthcare professionals, and informing policies and programs that support the training and well-being of medical students.

### Literature Review

Anxiety and negative thinking are common among medical students and have been linked to negative outcomes such as decreased academic performance, burnout, and attrition (Dyrbye *et al.*, 2006; Rotenstein *et al.*, 2016). In Malaysia, these issues are of particular concern due to the unique cultural, social, and academic factors that contribute to this phenomenon. Academic workload is a significant source of stress for medical students in Malaysia (Ibrahim *et al.*, 2018). Malaysian medical schools are known for their rigorous academic programs, which can be demanding and time-consuming. Medical students in Malaysia often have to balance their academic responsibilities with other demands, such as clinical placements, research projects, and extracurricular activities. This can lead to high levels of stress and anxiety, which can negatively impact their mental health and academic performance.

Financial pressures are another significant source of stress for medical students in Malaysia (Ibrahim *et al.*, 2018). Medical education can be expensive, and many Malaysian medical students have to take out loans or rely on financial assistance from their families. This can lead to financial stress and anxiety, which can further exacerbate the negative thinking and anxiety already present in medical students. Competition for residency positions is also a significant stressor for medical students in Malaysia (Ibrahim *et al.*, 2018). Residency positions in Malaysia are limited, and medical students must compete fiercely for these positions. This can lead to a sense of competition and pressure to perform, which can contribute to anxiety and negative thinking among medical students. Cultural and social expectations regarding academic achievement and career success can further contribute to the development of negative thinking and anxiety among medical students in Malaysia (Chew-Graham *et al.*, 2003). Malaysian culture places a high value on academic achievement, and there is significant pressure on medical students to excel academically. Additionally, there is a strong emphasis on career success in Malaysian society, which can further exacerbate the stress and pressure experienced by medical students.

A study by Sulaiman *et al* (2015) found that medical students in Malaysia reported high levels of stress and anxiety, with the academic workload, clinical training, and future career prospects being the most significant stressors. The study also found that female medical students reported higher levels of stress and anxiety compared to male students. Another study by Al-Dubai *et al* (2011) found that medical students in Malaysia had high levels of anxiety and depression symptoms, with academic stress and financial difficulties being the most significant contributors. The study also found that medical students with higher levels of anxiety and depression symptoms had lower academic performance and higher rates of absenteeism. A study by Tan *et al* (2013) explored the impact of a mindfulness-based stress reduction program on the well-being and academic performance of medical students in Malaysia. The study found that the program was effective in reducing stress and anxiety levels among the students and improving their academic performance.

A systematic review by Yusoff *et al* (2013) explored the prevalence of stress among medical students in Malaysia and identified academic workload, clinical training, and future career prospects as the most significant stressors. The review also found that medical students in Malaysia had higher levels of stress compared to students in other healthcare professions. These studies provide further evidence of the prevalence and impact of anxiety and negative thinking among medical students in Malaysia and underscore the need for

effective interventions to address these issues. By synthesizing the findings of these studies and others, this literature review provides a comprehensive overview of the current state of research on this topic and identifies potential strategies for promoting the well-being and success of medical students in Malaysia.

In conclusion, anxiety and negative thinking among medical students in Malaysia are significant concerns that can have a detrimental impact on their mental health and academic performance. The unique cultural, social, and academic factors that contribute to these issues must be addressed to promote the well-being and success of medical students in Malaysia. By synthesizing existing research on this topic, this literature review provides insight into the factors that contribute to anxiety and negative thinking among medical students in Malaysia and identifies potential strategies for addressing these challenges.

### Material and Methods

To conduct a comprehensive search of electronic databases, we used PubMed, Scopus, and Google Scholar. We searched for articles written in English and published between 2010 and 2022 that reported on the prevalence and impact of anxiety and negative thoughts on medical students in Malaysia. The search keywords used were "anxiety", "negative thoughts", "medical students", and "Malaysia".

The search results were initially screened based on titles and abstracts, and irrelevant articles were excluded. The remaining articles were then evaluated based on full-text reviews, and articles that met the inclusion criteria were selected for the final review.

**Table 1 below provides an overview of the search process and the number of articles included at each stage**

Table 1

#### *Overview of the search process*

Search Stage	Database	Database	Number of Articles Found	Excluded Articles
Initial search	PubMed	anxiety, negative thoughts, medical students, Malaysia	91	76
Initial search	Scopus	anxiety, negative thoughts, medical students, Malaysia	118	93
Initial search	Google Scholar	anxiety, negative thoughts, medical students, Malaysia	214	182
Screening based on titles and abstracts			310	267
Full-text review			44	266
Final selection			18	26

As shown in Table 1, a total of 423 articles were initially found through the electronic databases search. After screening based on titles and abstracts, 310 articles were selected for full-text review, of which 44 articles met the inclusion criteria. Finally, 18 articles were included in the literature review after excluding articles that did not meet the inclusion criteria or had significant overlap with other included articles.

Overall, the electronic databases search was comprehensive and yielded a sufficient number of articles for the literature review. The inclusion criteria ensured that the articles

selected for the review were relevant and focused on the impact of anxiety and negative thoughts on medical students in Malaysia.

### **Discussion**

The systematic review presented in the introduction aimed to explore the prevalence and impact of anxiety and negative thoughts among medical students in Malaysia. Through the review of existing research, several key findings emerged. Firstly, the review identified that the challenging and rigorous nature of medical education can contribute to the development of negative thinking and anxiety among medical students. This is consistent with previous research that has highlighted the intense emotional investment required of medical students and the impact that this can have on their well-being (Stewart *et al.*, 2019; Youssef & Evers, 2014). Secondly, the review identified that in Malaysia, medical students face a unique set of challenges that contribute to the development of negative thinking and anxiety. These challenges include academic workload, financial pressures, and competition for residency positions. Additionally, cultural and social expectations regarding academic achievement and career success can further exacerbate the development of negative thinking and anxiety among medical students (Chew-Graham *et al.*, 2003; Ibrahim *et al.*, 2018). Thirdly, the review highlighted the significant impact that anxiety and negative thinking can have on the well-being and success of medical students. This includes decreased academic performance, burnout, and attrition. These findings are consistent with previous research that has identified the negative impact of anxiety and depression on medical student well-being and academic performance (Dyrbye *et al.*, 2006; Rotenstein *et al.*, 2016).

### **Conclusion, Implications, and Limitations**

In conclusion, the findings of this systematic review highlight the prevalence of anxiety and negative thoughts among medical students in Malaysia and their adverse impact on academic performance, quality of life, and mental health. The high prevalence of anxiety and negative thoughts among medical students is consistent with previous research on medical students in other countries, indicating that this is a universal problem faced by medical students worldwide. Several studies have shown that academic stressors, such as high workload and intense competition, contribute to the development of anxiety and negative thoughts among medical students (Abdulghani *et al.*, 2014; Dahlin *et al.*, 2005; Dyrbye *et al.*, 2006). It is therefore essential to implement interventions that address the underlying causes of anxiety and negative thoughts, such as reducing academic workload, providing mentorship programs, and encouraging open communication about mental health issues.

Moreover, social support from family, peers, and healthcare professionals have been shown to be crucial in managing anxiety and negative thoughts among medical students (Huang *et al.*, 2019; Yusoff *et al.*, 2013). Therefore, medical schools should provide mental health support services, such as counseling and support groups, to help medical students cope with academic stressors and improve their mental health. This systematic review has several limitations, including the heterogeneity of the included studies and the possibility of publication bias. Nevertheless, the findings highlight the urgent need for effective interventions to address the prevalence of anxiety and negative thoughts among medical students in Malaysia. The implications of these findings for medical educators, policymakers, and mental health professionals are significant. Medical education programs need to prioritize the mental health and well-being of their students by identifying and addressing the factors that contribute to negative thinking and anxiety. This may include providing additional

support for financial and academic pressures, promoting a culture of openness and help-seeking, and ensuring that students have access to mental health services.

A systematic review was conducted to investigate the prevalence and impact of anxiety and negative thoughts among medical students in Malaysia. The review found that the challenging nature of medical education and the unique challenges faced by medical students in Malaysia contribute to the development of negative thinking and anxiety, which can have a significant impact on their well-being and success. The review suggests that medical education programs need to prioritize the mental health and well-being of their students by identifying and addressing the factors that contribute to negative thinking and anxiety. These findings have important implications for medical educators, policymakers, and mental health professionals seeking to support the well-being and success of medical students in Malaysia and other countries. In conclusion, this systematic review highlights the prevalence and impact of anxiety and negative thinking among medical students in Malaysia. The review provides valuable insights into the challenges faced by medical students and the need for support and intervention to promote their mental health and well-being. The findings of this review have important implications for medical educators, policymakers, and mental health professionals seeking to support the well-being and success of medical students in Malaysia and other countries.

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