

Evaluation of mindful attention using the MAAS scale in medical students at academic risk

Evaluación de la atención consciente mediante la escala MAAS en estudiantes de medicina en situación de riesgo académico

Tamara Crespo Salcedo, Ricardo González Sánchez, Dr. Arturo Llanes Castillo,
Dra. Ma. Luisa Reyes Váldez*

Abstract

Academic stress is a common problem among medical students and is associated with anxiety, depression, and burnout syndrome, which negatively affect academic performance and clinical empathy. In this context, mindfulness has been shown to be an effective strategy for reducing stress and improving emotional regulation. The Mindful Attention Awareness Scale (MAAS) is a validated instrument that assesses mindful attention and its relationship with psychological well-being, serving as a useful tool for identifying students at risk of academic vulnerability. The objective of this study was to evaluate mindful attention using the MAAS and to analyze its relationship with academic risk among medical students at the Autonomous University of Tamaulipas, as well as to explore its association with variables such as sex and academic semester. An observational, descriptive, and cross-sectional study was conducted in a sample of 47 medical students identified as being at academic risk. Data collection was carried out in person between April and May 2023 using the 15-item MAAS. Statistical analysis included descriptive and correlational statistics, as well as an assessment of the instrument's reliability using Cronbach's alpha coefficient. The results showed a mean total MAAS score of 66.68, with a normal distribution and high internal consistency of the instrument ($\alpha = 0.885$). Most students exhibited high or moderate levels of mindful attention; however, a subgroup with low levels was identified, suggesting the need to implement preventive strategies aimed at strengthening mindfulness to improve well-being and academic performance.

Keywords: mindful attention; mindfulness; medical students; academic risk; psychological well-being

Resumen

El estrés académico es un problema frecuente entre los estudiantes de medicina y se asocia con ansiedad, depresión y síndrome de burnout, lo que repercute negativamente en el rendimiento académico y en la empatía clínica. En este contexto, el mindfulness ha demostrado ser una estrategia eficaz para reducir el estrés y mejorar la regulación emocional. La escala Mindful Attention Awareness Scale (MAAS) es un instrumento validado que permite evaluar la atención consciente y su relación con el bienestar psicológico, constituyéndose como una herramienta útil para identificar estudiantes en situación de vulnerabilidad académica. El objetivo del estudio fue evaluar la atención consciente mediante la escala MAAS y analizar su relación con el riesgo académico en estudiantes de medicina de la Universidad Autónoma de Tamaulipas, así como explorar su asociación con variables como sexo y semestre académico. Se realizó un estudio observacional, descriptivo y transversal en una muestra de 47 estudiantes de medicina en situación de riesgo académico. La recolección de datos se llevó a cabo de manera presencial entre abril y mayo de 2023, utilizando la escala MAAS de 15 ítems. El análisis estadístico incluyó estadística descriptiva y correlacional, así como la evaluación de la confiabilidad del instrumento mediante el coeficiente alfa de Cronbach. Los resultados mostraron una media de 66.68 puntos en el puntaje total del MAAS, con una distribución normal y una alta consistencia interna del instrumento ($\alpha = 0.885$). La mayoría de los estudiantes presentó niveles altos o medios de atención consciente; sin embargo, se identificó un subgrupo con niveles bajos, lo que sugiere la necesidad de implementar estrategias preventivas orientadas al fortalecimiento del mindfulness para mejorar el bienestar y el desempeño académico.

Palabras clave: atención consciente; mindfulness; estudiantes de medicina; riesgo académico; bienestar psicológico

Correspondencia: allanes@docentes.uat.edu.mx

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*Universidad Autónoma de Tamaulipas, México





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María Luisa Reyes Váldez, Arturo Llanes Castillo, Tamara Crespo Salcedo, Ricardo Gonzalez Sánchez

Institución: Facultad de Medicina de Tampico "Dr. Alberto Romo Caballero" de la Universidad Autónoma de Tamaulipas

INTRODUCTION

Academic stress is a common problem among medical students and is frequently associated with anxiety, depression, and burnout syndrome, negatively affecting academic performance and clinical empathy. Mindfulness has demonstrated effectiveness in reducing stress and improving emotional regulation. The Mindful Attention Awareness Scale (MAAS) is a validated instrument designed to measure mindfulness and its impact on psychological well-being. Assessing mindfulness through the MAAS allows the identification of effective strategies to promote mental health and academic performance among future physicians.

OBJECTIVE

To evaluate mindful attention using the Mindful Attention Awareness Scale (MAAS) and its relationship with academic risk among medical students at the Universidad Autónoma de Tamaulipas. Additionally, the study aimed to: Measure levels of mindful attention among students at academic risk. Analyze the association between mindful attention and variables such as sex and academic semester.

METHODOLOGY

Design: Observational, descriptive, and cross-sectional study
Sample: 47 medical students at academic risk (≥ 18 years old)
Instrument: Mindful Attention Awareness Scale (MAAS), consisting of 15 items
Data collection: Conducted between April and May 2023, through in-person administration
Statistical analysis: Descriptive and correlational statistics were performed using SPSS. Instrument reliability was assessed using Cronbach's alpha.

RESULTS

Mindful attention scores were analyzed in 47 medical students at academic risk. The total MAAS score showed: Mean: 66.68 points Standard deviation: 13.40 Range: 43–88 points

The Shapiro–Wilk normality test showed a non-significant result ($W = 0.954$, $p = 0.062$), indicating that the assumption of normality for the total MAAS score distribution cannot be rejected.

The internal consistency of the instrument was high, with a Cronbach's alpha of 0.885, demonstrating adequate reliability for use in students at academic risk. Regarding mindfulness levels: High level: 46.81% Moderate level: 42.55% Low level: 10.64%. Figure 1.

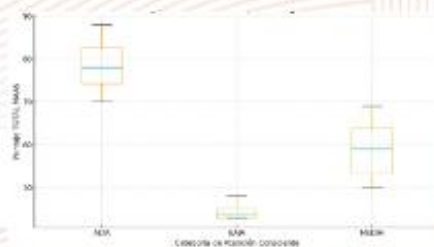


Figure 1. Total MAAS score by category

Category-based statistical analysis showed expected differences: High level: Mean = 78.68 (SD = 5.63) Moderate level: Mean = 59.00 (SD = 6.45) Low level: Mean = 44.60 (SD = 2.07).

CONCLUSIONS

The findings indicate that although a considerable proportion of students at academic risk present adequate or high levels of mindful attention, there is a vulnerable subgroup ($\approx 11\%$) with low mindfulness levels. According to the literature, this condition may be associated with: Greater academic distress, Lower emotional regulation, Increased distraction behaviors, such as excessive social media use, Poorer academic performance. These results highlight the importance of implementing mindfulness-based strategies to support mental health and academic functioning in medical students.

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