REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

ESTIMATIVAS DE RASTREAMENTO POSITIVO E MANIFESTAÇÕES SINTOMÁTICAS DA ANSIEDADE EM ESTUDANTES DE MEDICINA: UMA REVISÃO SISTEMÁTICA

ESTIMATES OF POSITIVE SCREENING AND SYMPTOMATIC MANIFESTATIONS OF ANXIETY IN MEDICAL STUDENTS: A SYSTEMATIC REVIEW

ESTIMACIONES DE TAMIZAJE POSITIVO Y MANIFESTACIONES SINTOMÁTICAS DE LA ANSIEDAD EN ESTUDIANTES DE MEDICINA: UNA REVISIÓN SISTEMÁTICA

Maria Vitória Fernandes Oliveira
Medical student, Faculdade Pitágoras de Codó, Codó, Maranhão, Brazil
E-mail: mvfernandees03@gmail.com

Iracema da Silva Aguiar
Medical student, Faculdade Pitágoras de Codó, Codó, Maranhão, Brazil
E-mail: iracemaaguiar2008@gmail.com

Ciro José Cavalcante Nascimento
Physician, Pitágoras College, Codó, Maranhão, Brazil
E-mail: cjccavalcante92@hotmail.com

Resumo

Introdução: A ansiedade constitui uma importante questão de saúde mental entre estudantes de Medicina, com estudos recentes identificando elevada frequência de rastreamento positivo para sintomas ansiosos. Entretanto, as manifestações sintomáticas permanecem pouco sistematizadas e sua descrição pode variar conforme o instrumento psicométrico utilizado. O objetivo foi sintetizar as estimativas de rastreamento positivo para sintomas ansiosos e descrever os domínios sintomáticos

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

contemplados pelos instrumentos utilizados em estudantes de Medicina. **Metodologia:** Revisão sistemática da literatura conduzida conforme a diretriz PRISMA 2020, com busca nas bases PubMed, LILACS e SciELO. Foram incluídos estudos observacionais que avaliaram sintomas ansiosos por meio de instrumentos validados. A qualidade metodológica foi avaliada pelo JBI Checklist for Studies Reporting Prevalence Data. **Resultados:** Foram incluídos 11 estudos transversais, totalizando 4.189 estudantes de Medicina de sete países. Devido à utilização de diferentes instrumentos, construtos e pontos de corte, as estimativas não constituem uma faixa epidemiológica única. No BAI, variaram de 30,8% a 85,5%, enquanto no GAD-7 variaram de 30,6% a 78,0%. O STAI e a Escala de Zung também apresentaram proporções elevadas de rastreamento positivo, com magnitudes dependentes dos critérios de classificação empregados. A extração dos dados mostrou que os estudos primários não apresentaram, de forma sistemática, frequências empíricas individuais dos sintomas. Dessa forma, a Tabela 4 representa os domínios sintomáticos contemplados pelos instrumentos, e não a frequência observada de manifestações específicas. O sexo feminino foi o fator associado mais consistentemente identificado. **Conclusão:** As proporções de rastreamento positivo para sintomas ansiosos foram elevadas nos estudos incluídos, mas apresentaram ampla variação conforme o instrumento, o construto avaliado e o ponto de corte. A literatura recente também apresenta limitação na descrição empírica dos sintomas individuais. Assim, a interpretação dos achados deve distinguir rastreamento psicométrico, manifestações sintomáticas empiricamente relatadas e diagnóstico clínico de transtornos de ansiedade.
Palavras-chave: Ansiedade; Estudantes de Medicina; Rastreamento; Sinais e Sintomas.

Abstract

Introduction: Anxiety is an important mental health concern among medical students, with recent studies identifying a high frequency of positive screening for anxiety symptoms. However, symptomatic manifestations remain poorly systematized, and their description may vary according to the psychometric instrument used. This study aimed to synthesize estimates of positive screening for anxiety symptoms and describe the symptomatic domains covered by the instruments used among medical students. **Methodology:** A systematic literature review was conducted according to the PRISMA 2020 guideline, with searches in PubMed, LILACS, and SciELO. Observational studies assessing anxiety symptoms using validated instruments were included. Methodological quality was assessed using the JBI Checklist for Studies Reporting Prevalence Data. **Results:** Eleven cross-sectional studies were included, comprising 4,189 medical students from seven countries. Due to the use of different instruments, constructs, and cutoff points, the estimates did not constitute a single epidemiological range. For the BAI, estimates ranged from 30.8% to 85.5%, whereas GAD-7 estimates ranged from 30.6% to 78.0%. The STAI and Zung Anxiety Scale also showed high proportions of positive screening, with magnitudes depending on the classification criteria used. Data extraction showed that the primary studies did not systematically report empirical frequencies of individual symptoms. Therefore, Table 4 represents the symptomatic domains covered by the instruments rather than the observed frequency of specific manifestations. Female sex was the most consistently associated factor. **Conclusion:** The proportions of positive screening for anxiety symptoms were high across the included studies, but varied substantially according to the instrument, construct assessed, and cutoff point. Recent literature also shows limitations in the empirical reporting of individual symptoms. Therefore, findings should be interpreted by distinguishing psychometric screening, empirically reported symptomatic manifestations, and clinical diagnosis of anxiety disorders.
Keywords: Anxiety; Medical Students; Screening; Signs and Symptoms.

Resumen

Introducción: La ansiedad constituye un importante problema de salud mental entre los estudiantes de Medicina, y estudios recientes han identificado una elevada frecuencia de tamizaje positivo para síntomas de ansiedad. Sin embargo, las manifestaciones sintomáticas siguen poco sistematizadas y su descripción puede variar según el instrumento psicométrico utilizado. El objetivo fue sintetizar las estimaciones de tamizaje positivo para síntomas de ansiedad y describir los dominios sintomáticos contemplados por los instrumentos utilizados en estudiantes de Medicina. **Metodología:** Revisión sistemática de la literatura realizada conforme a la directriz PRISMA 2020, con búsquedas en

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

PubMed, LILACS y SciELO. Se incluyeron estudios observacionales que evaluaron síntomas de ansiedad mediante instrumentos validados. La calidad metodológica se evaluó mediante el JBI Checklist for Studies Reporting Prevalence Data. **Resultados:** Se incluyeron 11 estudios transversales, con un total de 4.189 estudiantes de Medicina de siete países. Debido al uso de diferentes instrumentos, constructos y puntos de corte, las estimaciones no constituyeron un único rango epidemiológico. Para el BAI, las estimaciones variaron del 30,8% al 85,5%, mientras que para el GAD-7 variaron del 30,6% al 78,0%. El STAI y la Escala de Ansiedad de Zung también mostraron proporciones elevadas de tamizaje positivo, con magnitudes dependientes de los criterios de clasificación utilizados. La extracción de datos mostró que los estudios primarios no informaron sistemáticamente las frecuencias empíricas de síntomas individuales. Por lo tanto, la Tabla 4 representa los dominios sintomáticos contemplados por los instrumentos y no la frecuencia observada de manifestaciones específicas. El sexo femenino fue el factor asociado identificado con mayor consistencia. **Conclusión:** Las proporciones de tamizaje positivo para síntomas de ansiedad fueron elevadas en los estudios incluidos, pero presentaron una amplia variación según el instrumento, el constructo evaluado y el punto de corte. La literatura reciente también presenta limitaciones en la descripción empírica de los síntomas individuales. Por ello, los resultados deben interpretarse distinguiendo entre tamizaje psicométrico, manifestaciones sintomáticas descritas empíricamente y diagnóstico clínico de los trastornos de ansiedad.
Palabras clave: Ansiedad; Estudiantes de Medicina; Tamizaje; Signos y Síntomas.

1. Introduction

According to the World Health Organization, anxiety disorders are among the most prevalent psychiatric conditions worldwide and represent one of the leading causes of years lived with disability (WHO, 2017). However, when positive psychometric screening for anxiety symptoms is assessed, certain groups are disproportionately affected. Among medical students, the frequency of symptoms reaches notably high prevalence rates. In a meta-analysis encompassing more than 40,000 students from all continents, Quek et al. (2019) calculated a global prevalence of anxiety of 33.8%, with even higher rates in the Middle East and Asia. These indicators suggest that medical education constitutes an environment associated with multiple academic stressors, excessive workload, and competitiveness.

The occurrence of anxiety symptoms may coexist with other indicators of psychological distress, such as depression and stress. Rotenstein et al. (2016), in the most comprehensive meta-analysis ever conducted on the subject, documented a prevalence of depression or depressive symptoms of 27.2% among medical students from 47 countries, with alarming rates of suicidal ideation (11.1%) and only 15.7% of those affected seeking psychiatric treatment. Similarly, Puthran et al. (2016) estimated the global prevalence of depression in this population at

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

28.0%, identifying excessive workload, chronic sleep deprivation, and the constant need to demonstrate clinical competence as the most frequent stressors. This overlap of constructs reinforces the view that medical education involves a population with a high frequency of psychological symptoms.

In contexts characterized by greater social inequality and less extensive psychosocial support infrastructure, the situation is exacerbated. In Brazil, the multicenter VERAS study (Mayer et al., 2016), conducted with 1,350 students from 22 medical schools, recorded state anxiety in 81.7% and trait anxiety in 85.6% of participants, with female sex, location of the medical school in a state capital, and scholarship recipient status being associated with higher levels of anxiety. It should be clarified that state anxiety refers to a transient emotional state characterized by momentary tension and apprehension, whereas trait anxiety represents an individual's more stable predisposition to respond anxiously. Only 25.3% of students considered themselves to have adequate access to psychological support, and only 11.3% reported the existence of an institutional support system. Distinct sociocultural contexts, such as that of India (Sarkar et al., 2017), corroborate the finding that extreme performance pressure and deeply rooted stigma constitute global barriers to seeking treatment.

Despite the substantial volume of publications on prevalence rates and associated factors (Mendes; Dias, 2021), the literature has devoted considerably less attention to the phenomenological characterization of the anxiety experienced by these students. Anxiety may involve manifestations of different types, including psychological, physical, and behavioral components. However, the relative frequency of each of these manifestations and the symptom patterns identified through screening in the medical academic context remain unresolved gaps in the literature.

Therefore, addressing this gap is relevant to improving our understanding of how anxiety has been measured among medical students. In light of the above, the present systematic review was designed to synthesize estimates of positive screening for anxiety symptoms among medical students and describe the symptomatic domains covered by the instruments used in the recent literature (2020

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

to 2025). Specifically, the review sought to organize estimates according to the different instruments and classification criteria employed; separately describe the symptomatic manifestations empirically reported in the studies and the domains covered by psychometric scales; and identify the main factors associated with positive screening. This approach aims to contribute to a more precise interpretation of the literature by distinguishing psychometric screening results from empirically observed symptomatic manifestations and from the clinical diagnosis of anxiety disorders.

.

2. Methodology

This is a descriptive Systematic Literature Review designed to answer the following guiding question: “What are the estimates of positive screening for anxiety symptoms among medical students, how do they vary according to the instruments and classification criteria used, and what symptomatic manifestations are described in the literature?” To ensure methodological rigor, transparency, and reproducibility, this review was conducted in accordance with the recommendations of the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. The review protocol was registered in the PROSPERO database (CRD420261443716), and no methodological deviations from the originally registered plan occurred during the conduct of the study.

2.1. Search Strategy and information Sources

The literature search was conducted in the PubMed, SciELO (Scientific Electronic Library Online), and LILACS (Latin American and Caribbean Health Sciences Literature) databases. The Health Sciences Descriptors (DeCS) and Medical Subject Headings (MeSH) were used for the search. The basic search string was: ("Estudantes de Medicina" OR "Medical Students" OR "Students, Medical") AND ("Ansiedade" OR "Anxiety" OR "Anxiety Disorders"), adapted to the

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

specific syntax of each database. The complete and detailed search strategy for each database is available in Supplementary Material 1.

2.2. Eligibility Criteria

Original observational articles with a cross-sectional or cohort design that assessed the prevalence or frequency of anxiety among medical students using internationally validated instruments were included. Studies were required to report quantitative prevalence data or describe psychological, physical, and/or behavioral symptomatic manifestations. The search was restricted to full-text articles published in Portuguese, English, or Spanish between 2020 and 2025.

The time frame was intentionally defined to encompass the contemporary context of medical education and recent changes in the educational environment. The year 2020 was adopted as the starting point because it allowed the inclusion of studies published before, during, and after the reorganization of education resulting from the COVID-19 pandemic, without restricting the outcome to anxiety specifically attributed to the infection or to measures implemented to address the pandemic. Thus, studies conducted during or after the pandemic that assessed anxiety in the general context of medical education were retained. Conversely, studies in which anxiety was investigated exclusively as a response to specific external exposures, such as lockdown, social distancing, or fear of infection, were excluded.

Review studies, theses, dissertations, case reports, qualitative studies, and clinical trials were excluded, as were studies that addressed other psychiatric conditions without presenting specific data on anxiety. Mixed samples were also excluded when data for medical students were not reported separately.

Studies in which anxiety was exclusively linked to a specific external event, without assessment in the general context of medical education, were not included. This delimitation aimed to keep the review focused on anxiety assessed in the

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

context of medical education while preserving the comparability of the phenomenon investigated across studies. Post-pandemic studies that assessed anxiety in the context of readaptation to in-person teaching or to academic and medical routines were considered eligible.

2.3. Study Selection and Data Extraction

After duplicate removal, title and abstract screening was independently and blindly performed by two reviewers. Potentially eligible articles were assessed in full text, and disagreements were resolved by consensus. Data were extracted using a standardized instrument covering authorship, year, country, study design, sample size, assessment instrument, cutoff point, prevalence, symptomatic manifestations, and associated factors. Symptomatic manifestations were classified into two categories: (1) those explicitly described or quantified by the primary studies, considered empirical evidence; and (2) the symptomatic domains covered by the psychometric instruments used, presented separately when individual manifestations were not empirically described. Individual instrument items were not considered, in isolation, evidence of the occurrence or frequency of symptoms in the study population.

2.4. Methodological Quality Assessment

The methodological quality of the included studies was independently assessed by two reviewers using the JBI Checklist for Studies Reporting Prevalence Data (Munn et al., 2020). The instrument consists of nine items (appropriate sampling frame, appropriate sampling method, adequate sample size, description of subjects and setting, sample coverage, valid identification of the outcome, standardized and reliable measurement of the condition, appropriate statistical analysis, and adequate response rate), each classified as "yes," "no," or "unclear." As the JBI tool does not establish formal cutoff points for overall quality, the authors developed a categorization based on the number of criteria met, exclusively for descriptive and educational purposes in this review: High (9 items),

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

Moderately High (7–8), Moderate (5–6), Low-Moderate (4–3), and Low (2–1).

2.5. Data Synthesis and Limitations

The data were synthesized using a critical-descriptive approach and organized into grouping matrices. No meta-analysis was performed due to the conceptual and operational heterogeneity of the definitions of anxiety and positive screening, including the use of different instruments, constructs, and cutoff points, which would compromise the interpretability of a pooled estimate. Therefore, a narrative synthesis was chosen. The methodological limitations of the present study include the potential for publication bias resulting from the exclusion of gray literature and the language restriction imposed on the search.

3. RESULTS

3.1. Study Selection

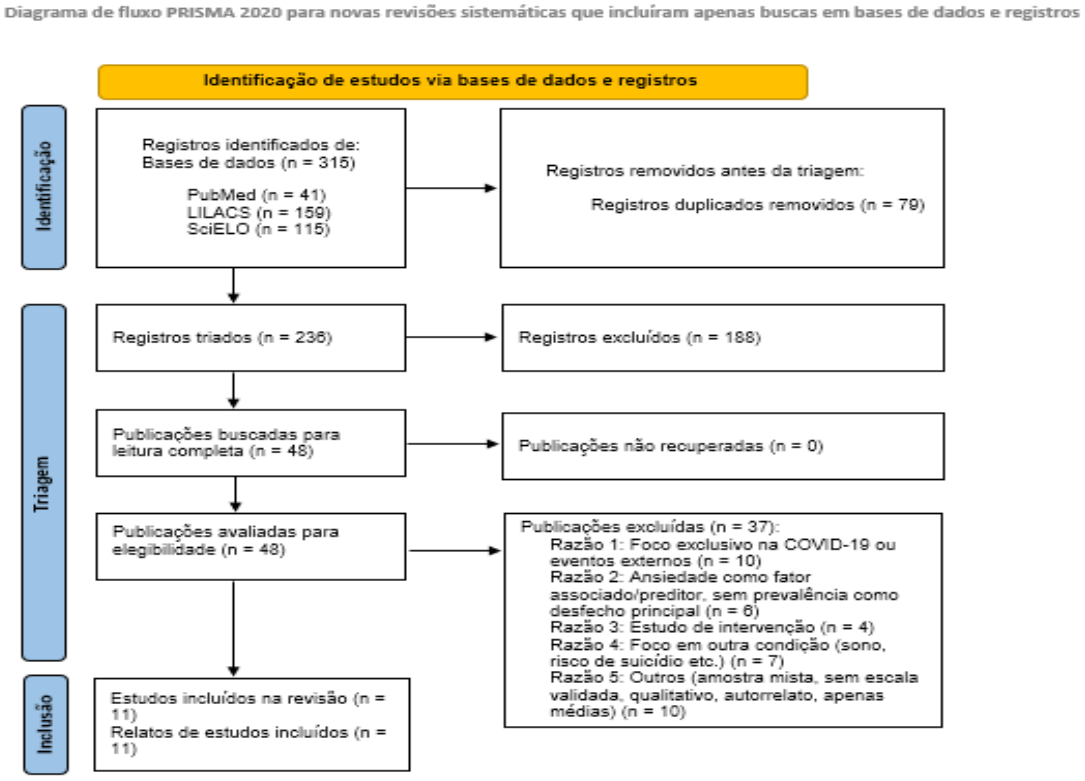
The article search and selection process is illustrated in the PRISMA flow diagram (Figure 1). A total of 315 records were identified in the PubMed (n=41), LILACS (n=159), and SciELO (n=115) databases. After the removal of 79 duplicates, 236 records remained for title and abstract screening. At this stage, 188 articles were excluded for not meeting the eligibility criteria, leaving 48 articles for full-text review. Following full-text assessment, 37 articles were excluded. The reasons for exclusion are detailed in Table 1. Ultimately, 11 studies were included in the review, of which 7 were retrieved from LILACS and 4 from SciELO. No studies retrieved exclusively from PubMed remained after the selection process.

Figure 1 – PRISMA 2020 flow diagram of the study selection process

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25



Source: Adapted from Page *et al*., (2021).
Note: The exclusion categories in the box "Excluded publications (n = 37)" mathematically correspond to the reasons detailed individually in Table 1, where category "Reason 5: Other (n = 10)" summarizes studies excluded due to the absence of a validated scale, a qualitative study design, a mixed sample, or the absence of a cutoff point.

Table 1 – Reasons for exclusion at the full-text review stage (n=37)

Reason	N
Exclusive focus on COVID-19 or external events (lockdown, social distancing)	10
Focus on another condition (sleep, smartphone addiction, sleepiness, suicide risk), with anxiety as a secondary element	7
Anxiety as an associated factor/predictor, without prevalence as the primary outcome	6
Intervention study (mindfulness, digital detox, etc.)	4
Focus on predictors, emotional intelligence, or association with medical training	3
No validated anxiety scale (other)	2
Mixed unstratified sample of medical students	1
Qualitative study, without a validated scale	1
Absence of a validated anxiety scale – self-reported diagnosis	1
Absence of quantitative prevalence data – means only	1

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

Self-reported diagnosis without a cutoff point	1

Source: Prepared by the authors, 2026.

3.2. Study Characteristics

Table 2 summarizes the characteristics of the 11 included studies, all of which had a cross-sectional design. The studies were published between 2020 and 2025, with sample sizes ranging from 110 to 1,028 participants (median = 355), totaling 4,189 medical students. Five studies were conducted in Brazil (Da Costa et al., 2020; Ribeiro et al., 2020; Sacramento et al., 2021; Brunfentrinker et al., 2021; Da Costa et al., 2022), one in Chile (Kobus et al., 2020), one in Mexico (Ramírez et al., 2024), one in Colombia (Pinilla et al., 2020), one in Peru (Leiva-Nina et al., 2022), one in Namibia (Mhata et al., 2023), and one in South Africa (Van Der Walt et al., 2020). Most samples included students from all years of the medical program; however, two studies were restricted to specific years (Da Costa et al., 2022: 1st to 7th semesters; Brunfentrinker et al., 2021: odd-numbered semesters and the 12th semester). The percentage of female participants ranged from 50.5% to 79.4%, with women predominating in all studies.

Five different anxiety assessment instruments were used. The Beck Anxiety Inventory (BAI) was the most frequently used instrument, employed in five studies (Da Costa et al., 2020; Kobus et al., 2020; Sacramento et al., 2021; Brunfentrinker et al., 2021; Leiva-Nina et al., 2022); one study used the State-Trait Anxiety Inventory (STAI) (Da Costa et al., 2022); two studies used the anxiety subscale of the Hospital Anxiety and Depression Scale (HADS-A) (Ribeiro et al., 2020; Van Der Walt et al., 2020); two studies used the Generalized Anxiety Disorder-7 (GAD-7) (Mhata et al., 2023; Ramírez et al., 2024); and one study used the Zung Anxiety Scale (Pinilla et al., 2020). The cutoff points for positive anxiety screening varied according to the instrument and the methodological choices of each study. Even among studies that used the same instrument, the thresholds adopted were heterogeneous: for the BAI, for example, three studies defined anxiety as present with a score greater than 10 (Da Costa et al., 2020; Sacramento et al., 2021;

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

Brunfentrinker et al., 2021), whereas one study considered the moderate-to-severe range (≥16) positive (Kobus et al., 2020), and another used a cutoff range of 0–7 to indicate the absence of anxiety (Leiva-Nina et al., 2022).

Table 2 – Characteristics of the included studies: methods and prevalence rates

Study	Country	n	Instrument	Cutoff point	Prevalence
Da Costa *et al*. (2022)	Brazil	152	STAI	<33 / 33-49 / >49	State: 98,6%; Trait: 97,4% (≥33); High: state 42,1%, trait 30,3% (>49)
Ramírez *et al*. (2024)	Mexico	141	GAD-7	0-4 / 5-9 / 10-14 / 15-21	78,0% (48,3% mod/severe)
Ribeiro *et al*. (2020)	Brazil	355	HADS-A	≥11	41,4%
Kobus *et al*. (2020)	Chile	559	BAI	Positive = mod + severe (≥16)	34,9%
Sacramento *et al*. (2021)	Brazil	458	BAI	present >10	30,8%
Brunfentrinker *et al*. (2021)	Brazil	405	BAI	0-10 / 11-19 / 20-30 / 31-63	33,8% mod/severe; 59,0% total
Mhata *et al*. (2023)	Namibia	229	GAD-7	≥10	30,6%
Van Der Walt *et al*. (2020)	South Africa	473	HADS-A	≥8	45,9%
Da Costa *et al*. (2020)	Brazil	279	BAI	0-10 / 11-19 / 20-30 / 31-63	33,7% (21,9% light; 10,8% mod; 1,0% severe)
Pinilla *et al*. (2020)	Colombia	1.028	Zung	Ordinal classification	72,5%
Leiva-Nina *et al*. (2022)	Peru	110	BAI	0-7 / 8-15 / 16-25 / 26-63	85,5%

Source: Prepared by the authors, 2026..

3.3. Methodological Quality

The methodological quality assessment using the JBI tool (Table 3) revealed that most studies were of moderately high quality. Only one study met all nine criteria

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

and was classified as high quality (Da Costa et al., 2020). Nine studies were classified as moderately high quality (Sacramento et al., 2021; Brunfentrinker et al., 2021; Da Costa et al., 2022; Leiva-Nina et al., 2022; Ribeiro et al., 2020; Van Der Walt et al., 2020; Kobus et al., 2020; Pinilla et al., 2020; Ramírez et al., 2024), and one was classified as moderate quality (Mhata et al., 2023). No studies were classified as low-moderate or low quality. The items that concentrated the main methodological weaknesses were sampling (Q2), with eight studies receiving a negative or unclear judgment because they used convenience samples or did not adequately describe the recruitment method, and response rate (Q9), which was considered unclear or unmet in all studies except one (Da Costa et al., 2020).

Tabela 3 – Methodological quality assessment of the included studies according to the JBI Checklist for Studies Reporting Prevalence Data (n=11)

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Quality
Da Costa *et al*. (2020)	✓	✓	✓	✓	✓	✓	✓	✓	✓	High
Sacramento *et al*. (2021)	✓	✓	✓	✓	✓	✓	✓	✓	?	Moderately High
Brunfentrinker *et al*. (2021)	✓	?	✓	✓	✓	✓	✓	✓	?	Moderately High
Da Costa *et al*. (2022)	✓	?	✓	✓	✓	✓	✓	✓	?	Moderately High
Leiva-Nina *et al*. (2022)	✓	✓	?	✓	✓	✓	✓	✓	?	Moderately High
Ribeiro *et al*. (2020)	✓	✗	✓	✓	✓	✓	✓	✓	?	Moderately High
Mhata *et al*. (2023)	✓	?	?	✓	✓	✓	✓	✓	?	Moderate
Van Der Walt *et al*. (2020)	✓	?	✓	✓	✓	✓	✓	✓	✗	Moderately High
Kobus *et al*. (2020)	✓	✗	✓	✓	✓	✓	✓	✓	?	Moderately High
Pinilla *et al*. (2020)	✓	✗	✓	✓	✓	✓	✓	✓	?	Moderately High
Ramírez *et al*. (2024)	✓	✗	✓	✓	✓	✓	✓	✓	✗	Moderately High

Source: Prepared by the authors, 2026.
Caption: Q1 = Appropriate sampling frame for the target population; Q2 = Appropriate sampling method; Q3 = Adequate sample size; Q4 = Subjects and setting described in detail; Q5 = Sufficient sample coverage; Q6 = Valid methods for identifying the condition; Q7 = Condition measured in a standardized and reliable manner; Q8 = Appropriate statistical analysis; Q9 = Adequate response rate and/or management of a low response rate. ✓ = Yes; ✗ = No; ? = Uncertain.

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

3.4. Prevalence of Anxiety Symptoms

Due to the use of different constructs, classification criteria, and cutoff points (BAI, GAD-7, HADS-A, STAI, and Zung), the results of this review do not constitute a single, continuous epidemiological range. The synthesis of the estimates reveals a strong dependence on the instrument used and the sociocultural contexts of the samples. Among the five studies that used the BAI, estimates ranged from 30.8% (Sacramento et al., 2021) to 85.5% (Leiva-Nina et al., 2022), according to the classification criteria adopted in each study. Differences in cutoff points and severity categories prevent this range from being interpreted as a single epidemiological interval.

The study that employed the STAI recorded considerably higher prevalence rates: Da Costa et al. (2022) found 98.6% for state anxiety and 97.4% for trait anxiety (cutoff point ≥33, indicating at least a moderate level). When the threshold was raised to >49 (high anxiety), prevalence rates decreased to 42.1% (state) and 30.3% (trait), highlighting the impact of the cutoff point on the magnitude of the estimates. The STAI is the only instrument in this review that distinguishes these two dimensions of anxiety.

The studies that used the GAD-7 reported positive screening rates of 30.6% (Mhata et al., 2023) and 78.0% (Ramírez et al., 2024, the latter with 48.3% reporting moderate to severe symptoms). In the two studies based on the HADS-A, prevalence rates were 41.4% (Ribeiro et al., 2020, cutoff point ≥11) and 45.9% (Van Der Walt et al., 2020, cutoff point ≥8). The only study that used the Zung Anxiety Scale (Pinilla et al., 2020) reported a prevalence of 72.5%.

3.5. Symptomatic Manifestations of Anxiety

The analysis of the primary study results revealed that the empirical frequency of individual symptoms was not reported systematically. The studies predominantly reported overall scores, severity categories, or positive screening

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

classifications based on the instruments. Therefore, the presence of a particular item in a scale was not considered evidence of the occurrence or frequency of that manifestation among participants.

Table 4 therefore presents the theoretical coverage of the five instruments used across the 11 studies. Differences can be observed in how each instrument addresses different dimensions of the anxiety construct. The BAI includes a greater number of items related to somatic and physical manifestations, as well as aspects associated with fear and panic; the GAD-7 and HADS-A primarily address cognitive and psychological aspects; the STAI organizes the assessment according to the state and trait dimensions; and the Zung Anxiety Scale covers affective and somatic content. These differences reflect the structure of the instruments used and should not be interpreted as evidence of a higher frequency of specific symptoms among students. The content covered by the instruments should not be interpreted as empirically observed manifestations or as estimates of the individual frequency of symptoms.

Table 4 – Domains and content covered by the instrument

Instrument	Symptomatic domains covered	Main focus
BAI	Somatic/physical manifestations; fear; panic-related content	Somatic/physical and fear/panic
GAD-7	Worry; tension; restlessness; irritability; apprehension	Cognitive/psychological
HADS-A	Tension; worry; restlessness; apprehension	Cognitive/psychological
STAI	State anxiety and trait anxiety	State and trait
Zung	Affective, cognitive, and somatic components	Mixed

Source: Prepared by the authors, 2026.

3.6. Factors Associated with Anxiety

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

Although the primary objective of this review was not to analyze associated factors, Table 5 systematically presents the main findings of the included studies. Female sex was the factor most consistently associated with the presence of anxiety symptoms, being reported in six of the 11 studies. Other recurrent associated factors included younger age (younger than 22 to 25 years), low income or financial vulnerability, living alone, fewer hours of sleep, a history of previous psychological or psychiatric treatment, and experience of stressful life events. In some studies, specific years of the medical program and non-heterosexual sexual orientation also emerged as associated factors.

Table 5 – Factors associated with anxiety in the included studies (n=11)

Study	Instrument	Factors Associated with Anxiety
Da Costa *et al*. (2022)	STAI	Age <25 years; low monthly income; participation in financial assistance programs (scientific initiation scholarship and low-income financial aid)
Ramírez *et al*. (2024)	GAD-7	No sociodemographic factor or COVID-19-related experience showed a statistically significant association.
Ribeiro *et al*. (2020)	HADS-A	Feeling lonely (PR 1.59; 95% CI 1.12–2.26); history of psychological/psychiatric treatment before university (PR 1.63; 95% CI 1.05–2.54); feeling morally injured at medical school (PR 1.66; 95% CI 1.17–2.36)
Kobus *et al*. (2020)	BAI	Female sex; second and third years of the medical program; living alone; stressful life event in the past 12 months
Sacramento *et al*. (2021)	BAI	Female sex; age <22 years; homosexual/bisexual orientation
Brunfentrinker *et al*. (2021)	BAI	Female sex (higher mean scores); association between severe anxiety and the “Walking in patient's shoes” subscale of the Jefferson Scale of Empathy (empathic stress)
Mhata *et al*. (2023)	GAD-7	Current treatment for a psychiatric disorder (adjusted OR 3.63; 95% CI 1.17–11.23)
Van Der Walt *et al*. (2020)	HADS-A	Female sex (PR 4.7; $p < 0.001$); participation in the 2017 mini-semester (PR 2.1; $p < 0.05$)
Da Costa *et al*. (2020)	BAI	No sociodemographic factors specifically associated with anxiety symptoms were found to have a statistically significant association. The factors cited by the authors (female sex, previous psychological care, fewer hours of sleep, and earlier years of the medical program) refer to depressive symptoms and stress.

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

Pinilla *et al*. (2020)	Zung	Female sex; living alone; less than 5 hours of leisure time per week; lack of time for meals; sleeping less than 5 hours per night; non-restorative sleep; feeling discriminated against; commuting > 90 minutes to the university
Leiva-Nina *et al*. (2022)	BAI	Female sex (higher frequency); low socioeconomic status; clinical-year courses; significant association with depression (p = 0.038)

Source: Prepared by the authors, 2026.

4. Discussion

The high frequency of anxiety symptoms is consistent with previous evidence. In a meta-analysis involving more than 40,000 medical students, Quek et al. (2019) estimated a global prevalence of anxiety of 33.8%, although rates varied across regions and instruments. This heterogeneity reinforces the need for caution when comparing studies that use different assessment methods. Although medical education involves multiple academic and professional demands, the results of this review do not allow a direct causal relationship to be established between these characteristics and the development of anxiety.

Heterogeneity was particularly evident across instruments and also among studies using the same scale. The BAI was applied using different classification criteria, including scores greater than 10 and severity categories, resulting in estimates ranging from 30.8% to 85.5% (Kobus et al., 2020; Sacramento et al., 2021; Leiva-Nina et al., 2022). This range does not represent a continuous epidemiological interval, as the cutoff points were not equivalent across studies. The same applies to the GAD-7, HADS-A, STAI, and Zung Anxiety Scale, whose estimates also reflect different classification criteria (Mhata et al., 2023; Ramírez et al., 2024; Ribeiro et al., 2020; Van Der Walt et al., 2020). For the STAI, the distinction between state anxiety and trait anxiety adds another dimension to the interpretation of the results, with different estimates depending on the threshold adopted (Da Costa et al., 2022).

Consequently, the results should not be directly compared with the prevalence of anxiety disorders established through clinical diagnosis. The included studies

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

used self-report instruments to identify symptoms or positive psychometric screening results, whereas the diagnosis of a disorder requires specific clinical criteria. Therefore, the percentages found indicate the frequency of students classified as positive by the instruments employed, without allowing the conclusion that the same proportion has a diagnosed anxiety disorder.

The co-occurrence of anxiety with other indicators of psychological distress has also been described among medical students. Rotenstein et al. (2016) identified a high frequency of depression or depressive symptoms in this population, while Puthran et al. (2016) also demonstrated a substantial burden of depressive symptoms. These findings indicate the coexistence of different dimensions of psychological distress during medical education, but they do not support the assumption that factors associated with depression are necessarily equivalent to those related to anxiety.

Regarding symptomatic manifestations, this review identified an important limitation in the recent literature: the included studies did not systematically report the empirical frequency of individual symptoms. Results were predominantly presented as overall scores, severity categories, or positive screening classifications. Therefore, the presence of a particular item in a scale does not demonstrate that the manifestation occurred at a specific frequency among participants. In this regard, Table 4 should be interpreted as a description of the symptomatic domains covered by the instruments, rather than as an estimate of symptom frequency.

Anxiety may involve psychological, physical, and behavioral manifestations, including worry, tension, autonomic symptoms, and behavioral changes (Mendes; Dias, 2021). However, in the present study, the presence of these components in the instruments was not considered evidence of their occurrence or frequency in the study population. This distinction is particularly important because the instruments differ in their coverage: the BAI predominantly addresses somatic and physical manifestations, as well as content related to fear and panic; the GAD-7 and HADS-A primarily cover cognitive and psychological aspects; the STAI organizes the

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

assessment according to the state and trait dimensions; and the Zung Anxiety Scale covers affective and somatic components.

These differences reflect the structure of the instruments used and do not allow the conclusion that the symptoms covered are necessarily the most prevalent or intense among students. Thus, manifestations such as tachycardia, sweating, tremors, dyspnea, worry, nervousness, restlessness, or fear represent dimensions assessed by the scales but do not, in isolation, provide information about their empirical frequency. Similarly, behaviors related to academic functioning or seeking care should not automatically be classified as symptoms. Seeking professional help, in particular, constitutes a health care-related behavior. Therefore, the included literature allows the coverage of the instruments to be characterized but reveals a gap in the empirical description of individual symptoms.

The factors associated with anxiety identified in the review also showed heterogeneity. Female sex was the most recurrent association, reported in six of the 11 studies, while younger age, lower socioeconomic status, living alone, shorter sleep duration, a history of psychological or psychiatric treatment, and stressful life events were observed in individual studies or subsets of the literature. Da Costa et al. (2022), for example, identified associations with socioeconomic characteristics and age, whereas Ribeiro et al. (2020) observed associations with loneliness, a history of psychological or psychiatric treatment, and the perception of moral injury in the university environment. In contrast, Ramírez et al. (2024) found no statistically significant association between the sociodemographic variables assessed and the outcome analyzed.

These findings should be interpreted as associations observed in specific contexts and populations. As the studies were predominantly cross-sectional, it is not possible to establish temporality or causality between the characteristics assessed and anxiety symptoms. Therefore, the term “associated factors” is more appropriate than “risk factors,” and the heterogeneity of the results precludes the identification of a universal set of associated factors. The relationship between anxiety and medical education should also be interpreted without assuming

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

causality, taking into account the possible coexistence of individual, academic, social, and institutional factors (Rotenstein et al., 2016; Puthran et al., 2016).

The methodological limitations of the primary studies also affect the interpretation of the estimates. Weaknesses were observed in sampling, response rates, and the representativeness of the populations studied, including convenience samples, recruitment at specific institutions, and incomplete information about nonrespondents. In addition, the studies were geographically concentrated, with five conducted in Brazil and the remainder in Latin America and African countries, with no studies identified in North America, Europe, Asia, or Oceania. Therefore, the results should not be considered representative of the global population of medical students.

This review also has limitations related to the search strategy and the scope of the research question. The search was conducted in PubMed, LILACS, and SciELO and restricted to publications in Portuguese, English, and Spanish, which may have reduced the retrieval of studies published in other languages or indexed in other databases. The exclusion of gray literature may also have contributed to the failure to identify potentially eligible studies. The 2020–2025 time frame allowed the analysis to focus on recent evidence and the contemporary context of medical education, while studies focused exclusively on specific pandemic-related exposures were excluded. Studies conducted during or after the pandemic that assessed anxiety in the general context of medical education were retained.

The heterogeneity of instruments, cutoff points, populations, and methods of reporting results also precluded quantitative meta-analysis. Combining estimates obtained using different instruments and different positive screening criteria would not necessarily produce a single clinically interpretable measure. Therefore, a narrative synthesis organized according to the instruments and criteria used in the primary studies was chosen, preserving methodological differences and avoiding the retrospective harmonization of non-equivalent cutoff points.

Despite these limitations, the results indicate important gaps for future research. Studies on anxiety among medical students could report, in addition to overall scores and severity categories, item-level or domain-level information, when

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

available, allowing a distinction between manifestations actually reported by participants and the theoretical content of the scales. Longitudinal studies may also help clarify the progression of symptoms throughout medical education and the temporality of associations observed in cross-sectional studies. Qualitative investigations may complement psychometric instruments by exploring experiences that may not be fully captured by standardized scales.

From an institutional perspective, the high frequency of positive screening identified across different studies may support consideration of strategies for identifying and providing support to students experiencing psychological distress, while respecting the distinction between screening and diagnosis. However, the present review does not allow the effectiveness of specific interventions to be determined. The applicability, frequency, and format of institutional screening, support, and care strategies should be evaluated in specific studies.

Taken together, the results point to three main findings: the proportions of positive screening for anxiety symptoms are high but vary widely according to the instrument and cutoff point; the recent literature does not provide sufficient data to establish the empirical frequency of individual symptoms, allowing only the domains covered by the instruments to be characterized with greater confidence; and limitations persist regarding sampling, response rates, methodological heterogeneity, and geographic representativeness. Thus, beyond the magnitude of positive screening, the detailed description of symptomatic manifestations among medical students, particularly at the item or domain level, remains an important gap in the literature.

5. Conclusion

This systematic review identified high proportions of positive screening for anxiety symptoms among medical students; however, the estimates varied considerably according to the instrument used, the construct assessed, and the cutoff point adopted. Therefore, the results do not support a single prevalence of anxiety for this population, and each estimate should be interpreted according to the

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

methodological criteria of the original study. Furthermore, positive screening findings should not be equated with the prevalence of clinically diagnosed anxiety disorders.

The analysis of symptomatic manifestations revealed an important limitation in the literature available from 2020 to 2025. The included studies did not systematically report the individual empirical frequencies of symptoms within the samples. Thus, it is not possible to conclude that certain manifestations were more frequent among students simply because they were included as items in the instruments used. Table 4 therefore represents the symptomatic domains covered by the scales, demonstrating that different instruments focus on distinct dimensions of anxiety rather than providing a ranking of symptoms actually observed in the population.

The results also indicate that factors such as female sex, younger age, socioeconomic conditions, living alone, and certain characteristics related to individual or academic contexts were associated with positive screening in different studies. However, the heterogeneity of the findings and the predominance of cross-sectional designs preclude causal interpretations or the definition of a universal set of associated factors. These associations should be understood as context-specific findings that may guide further research, particularly longitudinal studies.

The interpretation of the results must also take into account the limitations of the available evidence and of this review, including the geographic concentration of the studies, the use of only three databases, language restrictions, the exclusion of gray literature, weaknesses in sampling and response rates, and the heterogeneity of the instruments and cutoff points. These characteristics limit the generalizability of the findings and justify the absence of a pooled quantitative synthesis.

In light of these findings, future studies should prioritize greater standardization in the reporting of psychometric results, provide detailed classification criteria, and, when possible, report item-level or domain-level results. Longitudinal studies and intervention studies are also needed to assess symptom progression, clarify the temporality of associations, and determine the effectiveness of institutional screening, support, and care strategies.

In summary, this review demonstrates that positive screening for anxiety symptoms is a frequent finding in studies of medical students, but it also shows that

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

the magnitude of the estimates and the description of symptomatic manifestations are strongly influenced by measurement choices. The main contribution of this review, therefore, lies in simultaneously demonstrating the high frequency of positive screening and the insufficiency of empirical symptom-level data, highlighting the need for research that more precisely describes the symptomatic experiences of this population without conflating psychometric coverage with clinical occurrence.

REFERENCES

BRUNFENTRINKER, C.; GOMIG, R. P.; GROSSEMAN, S. Prevalência de empatia, ansiedade e depressão, e sua associação entre si e com gênero e especialidade almejada em estudantes de medicina. **Revista Brasileira de Educação Médica**, v. 45, n. 3, p. e182, 2021. DOI: https://doi.org/10.1590/1981-5271v45.3-20210177.

DA COSTA, D. S. *et al*. Sintomas de depressão, ansiedade e estresse em estudantes de Medicina e estratégias institucionais de enfrentamento. **Revista Brasileira de Educação Médica**, Brasília, v. 44, n. 1, e040, 2020. DOI: https://doi.org/10.1590/1981-5271v44.1-20190069.

DA COSTA, T. G. *et al*. Prevalência e fatores associados à depressão e ansiedade entre estudantes de medicina de uma universidade do interior do Brasil. **Medicina (Ribeirão Preto)**, Ribeirão Preto, v. 55, n. 4, e-196142, 2022. DOI: https://doi.org/10.11606/issn.2176-7262.rmrp.2022.196142.

KOBUS, V.; CALLETTI, M. J.; SANTANDER, J. Prevalencia de síntomas depresivos, síntomas ansiosos y riesgo de suicidio en estudiantes de medicina de la Pontificia Universidad Católica de Chile. **Revista Chilena de Neuro-Psiquiatría**, v. 58, n. 4, p. 314-323, 2020. DOI: https://doi.org/10.4067/S0717-92272020000400314.

LEIVA-NINA, M. *et al*. Association between anxiety and depression in medical students at the Ricardo Palma University during the year 2021. **Revista de la Facultad de Medicina Humana**, v. 22, n. 4, p. 735-742, 2022. DOI: https://doi.org/10.25176/RFMH.v22i4.4842.

MAYER, F. B. *et al*. Factors associated to depression and anxiety in medical students: a multicenter study. **BMC Medical Education**, v. 16, p. 282, 2016. DOI: https://doi.org/10.1186/s12909-016-0791-1.

MENDES, T. C.; DIAS, A. C. P. Sintomas de depressão, ansiedade, estresse e fatores associados em estudantes de medicina brasileiros: revisão

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

integrativa. **Research, Society and Development**, v. 10, n. 4, e14910414033, 2021. DOI: https://doi.org/10.33448/rsd-v10i4.14033.

MHATA, N. T. *et al*. Prevalence of depression, anxiety and burnout in medical students at the University of Namibia. **South African Journal of Psychiatry**, v. 29, n. 1, p. 1-9, 2023. DOI: https://doi.org/10.4102/sajpsychiatry.v29i0.2044.

MUNN, Z. *et al*. Chapter 5: Systematic reviews of prevalence and incidence. In: Aromataris E, Munn Z (Editors). **JBI Manual for Evidence Synthesis**, 2020.

PAGE, M. J. *et al*. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. **BMJ**, v. 372, n. 71, 2021. DOI: https://doi.org/10.1136/bmj.n71.

PINILLA, L. M. *et al*. Prevalencia y Factores de riesgo de ansiedad en estudiantes de Medicina de la Fundación Universitaria Juan N. Corpas. Un estudio de corte transversal. **Revista Cuarzo,** v. 26, n. 1, p. 22-27, 2020. DOI: https://doi.org/10.26752/cuarzo.v26.n1.493.

PURIM, K. S. M. *et al*. Privação do sono e sonolência excessiva em médicos residentes e estudantes de medicina. **Revista do Colégio Brasileiro de Cirurgiões**, v. 43, n. 6, p. 438-444, 2016. DOI: https://doi.org/10.1590/0100-69912016006005.

PUTHRAN, R. *et al*. Prevalence of depression amongst medical students: A meta-analysis. **Medical Education**, v. 50, n. 4, p. 456-468, 2016. DOI: https://doi.org/10.1111/medu.12962.

QUEK, T. T. *et al*. The global prevalence of anxiety among medical students: a meta-analysis. **International Journal of Environmental Research and Public Health**, v. 16, n. 15, p. 2735, 2019. DOI: https://doi.org/10.3390/ijerph16152735.

RAMÍREZ, M. C. A. *et al*. Síntomas de ansiedad en estudiantes de medicina ante el regreso a clases presenciales postpandemia. **Investigación en Educación Médica**, v. 13, n. 49, p. 30-39, 2024. DOI: https://doi.org/10.22201/fm.20075057e.2024.49.23586.

RIBEIRO, C. F. *et al*. Prevalence of and factors associated with depression and anxiety in Brazilian Medical students. **Revista Brasileira de Educação Médica,** v. 44, n. 1, p. e021, 2020. DOI: https://doi.org/10.1590/1981-5271v44.1-20190102.ING.

ROTENSTEIN, L. S. *et al*. Prevalence of depression, depressive symptoms, and suicidal ideation among medical students: a systematic review and meta-analysis. **JAMA**, v. 316, n. 21, p. 2214-2236, 2016. DOI: https://doi.org/10.1001/jama.2016.17324.

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

SACRAMENTO, B. O. *et al*. Symptoms of anxiety and depression among medical students: study of prevalence and associated factors. **Revista Brasileira de Educação Médica**, v. 45, n. 1, e021, 2021. DOI: https://doi.org/10.1590/1981-5271v45.1-20200394.ING.

SARKAR, S.; GUPTA, R.; MENON, V. A systematic review of depression, anxiety, and stress among medical students in India. **Journal of Mental Health and Human Behaviour**, v. 22, n. 2, p. 88-96, 2017. DOI: https://doi.org/10.4103/jmhhb.jmhhb_20_17.

VAN DER WALT, S. *et al*. The burden of depression and anxiety among medical students in South Africa: A cross-sectional survey at the University of Cape Town. **South African Medical Journal**, v. 110, n. 1, p. 69-79, 2020.

WORLD HEALTH ORGANIZATION - WHO. **Depression and other common mental disorders: global health estimates**. Geneva: WHO, 2017.

CC BY

REMUNOM
ISSN 2178-6925

Received: 10/09/2026 - **Accepted:** 11/10/2026
Vol: 13.21
DOI: 10.66104/rn1fde78
Pages: 1-25

SUPPLEMENTARY MATERIAL 1

Table S1 – Complete Search Strategies for the Electronic Databases

Database	Search Date	Search Strategy(Boolean Equation)	Filters Applied	Obtained Results
PubMed	06/07/2026	("Students, Medical"[Mesh] OR "Medical Students"[Title/Abstract]) AND ("Anxiety"[Mesh] OR "Anxiety Disorders"[Mesh] OR "Anxiety"[Title/Abstract])	Ano de publicação (2020 - 2025), Idioma (Português, Inglês, Espanhol).	41
LILACS (via Portal Regional BVS)	06/07/2026	(tw:("Estudantes de Medicina" OR "Medical Students" OR "Estudiantes de Medicina")) AND (tw:("Ansiedade" OR "Anxiety" OR "Ansiedad"))	Ano (2020 - 2025), Idioma (Português, Inglês, Espanhol).	159
SciELO	06/07/2026	(Estudantes de Medicina OR Medical Students OR Estudiantes de Medicina) AND (Ansiedade OR Anxiety OR Ansiedad)	Ano de publicação (2020 - 2025), Idioma (Português, Inglês, Espanhol).	115

Source: Prepared by the authors, 2026.

CC BY