

ARTICLE

FACTORS INFLUENCING MEDICAL CAREER CHOICE AND THEIR IMPACT ON STUDENTS' MENTAL HEALTH: AN INTEGRATIVE REVIEW¹

REJANE MARTINS REGINALDI SCHULTZ¹

ORCID: <https://orcid.org/0009-0002-2903-7766>
schultzrejane@gmail.com

UBIRATAN BRUM DE CASTRO¹

ORCID: <https://orcid.org/0000-0002-9304-455X>
ubrum@terra.com.br

RUBENS LENE CARVALHO TAVARES¹

ORCID: <https://orcid.org/0000-0002-1886-1621>
rubens.ufmg@gmail.com

¹Universidade Federal de Minas Gerais. Belo Horizonte, Minas Gerais (MG), Brazil.

ABSTRACT: Medical career choice is influenced by factors such as vocation, family influence, financial stability, and social prestige, which can affect students' mental health. This research aimed to conduct an integrative review of the motivations influencing the choice of a medical career and to analyze their impacts on mental health, mapping motivational matrices, identifying the main axes of psychological distress, and discussing the implications of these findings for student retention policies in Higher Education. We utilized Virtual Health Library (VHL), PubMed, Web of Science, PsychInfo, Scopus, Embase, and Cochrane, searching descriptors related to medical profession choice and mental health. Two independent researchers selected articles using the Rayyan software. A total of 1,591 articles were identified, of which 28 were selected for analysis. The main motivational factors for career choice were altruism and family influence. Nineteen studies explored symptoms like anxiety, depression, insomnia, and burnout. An increase in female participation in medicine and the challenges faced, such as balancing professional and personal life, were noted. The COVID-19 pandemic increased altruistic interest but also stress and academic dropout rates. Some studies reported that career idealizations can lead to frustration. The motivations for choosing a medical career are influenced by a complex interplay of personal, social, and academic factors, including altruism, a perception of medicine as a stable and financially rewarding career, and a desire to make a difference in people's lives. The methodological diversity across different populations and countries hinders generalizable conclusions and underscores the need for studies involving diverse populations.

Keywords: Career choice, medical schools, undergraduate medical education, medical students

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MOTIVAÇÕES NA ESCOLHA DO CURSO E SUAS REPERCUSSÕES NA SAÚDE MENTAL DO ESTUDANTE DE MEDICINA: UMA REVISÃO INTEGRATIVA

RESUMO: A escolha da carreira médica é influenciada por fatores como vocação, influência familiar, estabilidade financeira e prestígio social, podendo gerar impactos na saúde mental dos estudantes. Esta pesquisa teve como objetivo geral realizar uma revisão integrativa sobre as motivações que influenciam a escolha da carreira médica e analisar seus impactos sobre a saúde mental, buscando mapear suas matrizes motivacionais, identificar os principais eixos de sofrimento psíquico e discutir as implicações desses achados para as políticas de permanência estudantil no Ensino Superior. Utilizaram-se as bases de dados BVS, PubMed, Web of Science, PsychInfo, Scopus, Embase e Cochrane, pesquisando-se descritores que abordavam a escolha da profissão médica e a saúde mental. Dois pesquisadores independentes selecionaram os artigos por meio do software Rayyan. Foram identificados 1.591 artigos, sendo 28 selecionados para análise. Os principais fatores motivacionais para a escolha da carreira foram o altruísmo e a influência familiar. Dezenove estudos investigaram sintomas como ansiedade, depressão, insônia e *burnout*. Observou-se um aumento da participação feminina na medicina e os desafios enfrentados, como conciliação entre vida profissional e pessoal. A pandemia da covid-19 aumentou o interesse altruísta, mas também o estresse e a evasão acadêmica. Alguns estudos relataram que idealizações sobre a carreira podem levar a frustrações. As motivações para a escolha da carreira médica são influenciadas por uma série de fatores pessoais, sociais e acadêmicos, complexos e inter-relacionados, como o altruísmo, a percepção da medicina como uma carreira estável e financeiramente compensadora e o desejo de fazer a diferença na vida das pessoas. A grande diversidade metodológica, abrangendo diferentes populações e países, dificulta conclusões generalizadas e sugere a necessidade de estudos envolvendo populações distintas.

Palavras-chave: Escolha da profissão, Faculdades de medicina, Educação de Graduação em medicina, Estudantes de medicina.

FACTORES QUE INFLUYEN EN LA ELECCIÓN DE LA CARRERA MÉDICA Y SU IMPACTO EN LA SALUD MENTAL DE LOS ESTUDIANTES: UNA REVISIÓN INTEGRATIVA

RESUMEN: La elección de la carrera médica está influenciada por factores como la vocación, la influencia familiar, la estabilidad financiera y el prestigio social, lo que puede afectar la salud mental de los estudiantes. Esta investigación tuvo como objetivo general realizar una revisión integrativa sobre las motivaciones que influyen en la elección de la carrera médica y analizar sus impactos en la salud mental, buscando identificar sus matrizes motivacionales, identificar los principales ejes de sufrimiento psíquico y discutir las implicaciones de estos hallazgos para las políticas de permanencia estudiantil en la Educación Superior. Fueron utilizadas bases de datos como BVS, PubMed, Web of Science, Embase y Cochrane, buscando descriptores relacionados con la elección de la profesión médica y la salud mental. Dos investigadores independientes seleccionaron los artículos utilizando el software Rayyan. Fue identificado un total de 1,591 artículos, de los cuales 28 fueron seleccionados para análisis. Los principales factores motivacionales para la elección de la carrera fueron el altruismo y la influencia familiar. Diecinueve estudios investigaron síntomas como ansiedad, depresión, insomnio y burnout. Se observó un aumento en la participación femenina en la medicina y los desafíos enfrentados, como la conciliación entre la vida profesional y personal. La pandemia del COVID-19 aumentó el interés altruista, pero también el estrés y las tasas de abandono académico. Algunos estudios informaron que las idealizaciones sobre la carrera pueden llevar a frustraciones. Las motivaciones para elegir una carrera médica están influenciadas por una compleja interacción de factores personales, sociales y académicos, como el altruismo, la percepción de la medicina como una carrera estable y financieramente gratificante, y el deseo de hacer la diferencia en la vida de las personas. La diversidad metodológica, que alcanza diferentes poblaciones y países, dificulta las conclusiones generalizadas y sugiere la necesidad de estudios que involucren poblaciones.

Palabras clave: Elección de la Profesión, facultades de medicina, educación superior en medicina, estudiantes de medicina.

INTRODUCTION

The decision to pursue a medical career is undoubtedly influenced by several factors, ranging from motivations and unconscious influences. This topic has been a prominent subject of empirical investigation both in Brazil and internationally (Ribeiro et al., 2011). Historically, the medical profession has been distinguished within society by a unique set of core attributes. However, these attributes, which attract many prospective applicants, frequently contrast with the empirical reality they experience upon entering the field. Most studies on this subject fail to provide a comprehensive overview of individual motivations and their direct relationship with career choices. This limitation is largely due to the inherent subjectivity of the phenomenon and methodological challenges it presents (Millan et al., 2005).

The literature conceptualizes motivation as a dynamic force that drives human behavior toward a specific objective. Consequently, having motivation implies a sustained commitment to executing a particular action. Furthermore, an individual may experience distinct forms of motivation, which vary significantly in intensity. Thus, investigating the determinants of human behavior entails uncovering the underlying rationales behind these actions (Cunha et al., 2021). Nevertheless, both the motivating factors and the personal traits predisposed to medicine and medical careers exhibit substantial heterogeneity among medical professionals.

Hippocrates, widely regarded as the progenitor of medicine, delineated the essential attributes of medical practice. According to his early tenets, an ideal physician should possess innate aptitude, cultural refinement, academic diligence, a robust theoretical foundation, and a strong predisposition toward labor, alongside personal time, persistence, resilience, and appropriate motivations. Consequently, the discourse surrounding well-structured personal traits and the underlying motivations for entering the medical profession represents a long-standing historical concern (Millan et al., 2005). These authors observed that, rather than assessing the motivations and personal characteristics of those seeking admission to medical school, current selection processes place a disproportionate emphasis solely on cognitive attributes.

When evaluating undergraduate students, we observe a distinct anxiety, characterized by tension and apprehension regarding the choice of pursuing a career in medicine, among certain individuals. While some students appear well-adapted to the academic environment and find fulfillment in their choices, embracing both the present and future inherent challenges, others may be disoriented, dissatisfied, regretful, and even experience psychological distress related to their career decision. Within this latter cohort, some high-achieving students possess a comprehensive mastery of theoretical frameworks and academic competencies yet remain unfulfilled, unhappy, and profoundly disconnected from the field. Conversely, other students, despite not demonstrating exemplary academic performance, appear visibly aligned with and adapted to the medical academic culture and their future profession.

In this scenario, several core areas warrant further exploration, specifically prospective expectations and motivations regarding the choice of a medical career, and their potential impact on the psychological well-being of these individuals. Existing literature suggests that academic burnout is a significant challenge throughout medical training, characterized by a pronounced loss of academic interest and diminished motivation, among others. Furthermore, Gyórfy et al. (2016) states that the analysis of this phenomenon must extend beyond the academic environment and inherent personality

traits, demonstrating that the initial career choice plays a critical role in the pathogenesis of burnout and the impairment of mental health (Győrffy et al., 2016).

Understanding motivational factors is paramount, as motivation directly influences the educational process, professional satisfaction, and career selection (Terzi et al., 2022). Given this context and considering that a definitive consensus on the topic has yet been reached in the literature, it is opportune to conduct this research on medical students' perceptions of their career choices, seeking to examine the impacts these decisions have on their lives. Therefore, to frame this investigation, the study was guided by the following core research question: “What drives students to choose a medical degree?”

Under the lens of contemporary educational research, the choice of an undergraduate major and subsequent academic experiences does not constitute purely individual or clinical phenomena. They represent processes deeply intersected by university admission policies and student retention conditions in Higher Education. Enrolling in highly competitive programs with substantial social prestige, such as Medicine, uniquely strains the subjectivity of undergraduate students, mobilizing expectations that frequently clash with pedagogical structures and institutional logics.

Understanding the mechanisms that connect initial motivation to later student illness is crucial for positioning the relationship between health and education at the core of debates surrounding institutional belonging and academic dropout in higher education. Consequently, the field of Education is challenged to analyze these dynamics from an interdisciplinary perspective, highlighting on how institutional and pedagogical support mechanisms can mitigate psychological distress and ensure the successful completion of these undergraduates' academic journeys.

OBJECTIVES

This study aims to conduct an integrative literature review of the motivations influencing the choice of a medical career, and to analyze the subsequent impacts of this decision on the mental health of medical students. The specific objectives were to: (i) map the intrinsic and extrinsic motivational matrices that drive the decision to enter medical school; (ii) identify the primary dimensions of psychological distress arising from this choice; and (iii) discuss the implications of these findings for student retention policies and pedagogical support frameworks in Higher Education.

MATERIALS AND METHODS

To achieve these objectives, an integrative literature review was used to analyze the motivations underlying the choice of a medical career and the corresponding impacts of this decision on medical students' mental health.

A comprehensive electronic search was conducted across the following databases: the Virtual Health Library (VHL/BVS), MEDLINE (via PubMed), Web of Science, Embase, the Cochrane Library, and PsycINFO. Search descriptors were selected in strict following the Health Sciences Descriptors (DeCS) and Medical Subject Headings (MeSH), as detailed in Table 1. These descriptors encompassed concepts related to medical career choices alongside associated emotional and psychological health outcomes, such as stress, anxiety, and depression.

Search strategies were adapted to meet the specific syntax requirements of each database, enhancing the retrieval of relevant literature. The combination of terms incorporated variables related to career choices and the mental health of medical students, which are outlined in the table below (Table 1).

Table 1. Detailed search strategies by database.

DATABASE (Records identified)	Search Strategies*
VHL* (17)	((<i>“Career Choice”</i> OR <i>“Escolha da profissão”</i> OR <i>“Selección de Profesión”</i>) AND (<i>“Medical Schools”</i> OR <i>“Faculdades de medicina”</i> OR <i>“Facultades de Medicina”</i> OR <i>“Undergraduate Medical Education”</i> OR <i>“Educação de Graduação em medicina”</i> OR <i>“Educación de Pregrado en Medicina”</i> OR <i>“Undergraduate Medical Education”</i> OR <i>“Medical Students”</i> OR <i>“Estudiantes de Medicina”</i>) AND (<i>“Stress, Psychological”</i> OR <i>anxiety</i> OR <i>depression</i> OR <i>“Quality of Life”</i> OR <i>“Mental Health”</i> OR <i>“Anxiety Disorders”</i> OR <i>“Depressive Disorder”</i> OR <i>“Occupational Stress”</i> OR <i>“Psychological Distress”</i> OR <i>“Mental Fatigue”</i> OR <i>“Burnout, Psychological”</i> OR <i>“Estresse Psicológico”</i> OR <i>ansiedade</i> OR <i>depressão</i> OR <i>“Qualidade de Vida”</i> OR <i>“Saúde Mental”</i> OR <i>“Transtornos de Ansiedade”</i> OR <i>“Trastornos de Ansiedad”</i> OR <i>“Transtorno Depressivo”</i> OR <i>“Trastorno Depresivo”</i> OR <i>“Estresse Ocupacional”</i> OR <i>“Estrés Laboral”</i> OR <i>“Angústia Psicológica”</i> OR <i>“Distrés Psicológico”</i> OR <i>“Fadiga Mental”</i> OR <i>“Fatiga Mental”</i> OR <i>“Esgotamento Psicológico”</i> OR <i>“Agotamiento Psicológico”</i>))
MEDLINE via PubMed (204)	((<i>“Career Choice”</i> AND (<i>“Medical Schools”</i> OR <i>“Undergraduate Medical Education”</i> OR <i>“Undergraduate Medical Education”</i> OR <i>“Medical Students”</i>) AND (<i>“Stress, Psychological”</i> OR <i>Anxiety</i> OR <i>Depression</i> OR <i>“Mental Health”</i> OR <i>“Anxiety Disorders”</i> OR <i>“Depressive Disorder”</i> OR <i>“Occupational Stress”</i> OR <i>“Psychological Distress”</i> OR <i>“Mental Fatigue”</i> OR <i>“Burnout, Psychological”</i>))
Cochrane (4)	((<i>“Career Choice”</i>) AND (<i>“Medical Schools”</i> OR <i>“Undergraduate Medical Education”</i> OR <i>“Medical Students”</i>) AND (<i>“Stress, Psychological”</i> OR <i>Anxiety</i> OR <i>Depression</i> OR <i>“Mental Health”</i> OR <i>“Anxiety Disorders”</i> OR <i>“Depressive Disorder”</i> OR <i>“Occupational Stress”</i> OR <i>“Psychological Distress”</i> OR <i>“Mental Fatigue”</i> OR <i>“Burnout, Psychological”</i>))
Scopus (282)	((<i>“Career Choice”</i>) AND (<i>“Medical Schools”</i> OR <i>“Undergraduate Medical Education”</i> OR <i>“Undergraduate Medical Education”</i> OR <i>“Medical Students”</i>) AND (<i>“Stress, Psychological”</i> OR <i>Anxiety</i> OR <i>Depression</i> OR <i>“Mental Health”</i> OR <i>“Anxiety Disorders”</i> OR <i>“Depressive Disorder”</i> OR <i>“Occupational Stress”</i> OR <i>“Psychological Distress”</i> OR <i>“Mental Fatigue”</i> OR <i>“Burnout, Psychological”</i>))
Web of Science (79)	((<i>“Career Choice”</i>) AND (<i>“Medical Schools”</i> OR <i>“Undergraduate Medical Education”</i> OR <i>“Undergraduate Medical Education”</i> OR <i>“Medical Students”</i>) AND (<i>“Stress, Psychological”</i> OR <i>Anxiety</i> OR <i>Depression</i> OR <i>“Mental Health”</i> OR <i>“Anxiety Disorders”</i> OR <i>“Depressive Disorder”</i> OR <i>“Occupational Stress”</i> OR <i>“Psychological Distress”</i> OR <i>“Mental Fatigue”</i> OR <i>“Burnout, Psychological”</i>))
Embase (792)	((<i>“Career Choice”</i>) AND (<i>“Medical Schools”</i> OR <i>“Undergraduate Medical Education”</i> OR <i>“Undergraduate Medical Education”</i> OR <i>“Medical Students”</i>) AND (<i>“Stress, Psychological”</i> OR <i>Anxiety</i> OR <i>Depression</i> OR <i>“Mental Health”</i> OR <i>“Anxiety Disorder”</i> OR <i>“distress syndrome”</i> OR <i>“Mental Fatigue”</i> OR <i>“Burnout, Psychological”</i>))
PsycINFO (209)	((<i>“Career Choice”</i>) AND (<i>“Medical Schools”</i> OR <i>“Undergraduate Medical Education”</i> OR <i>“Medical Students”</i>) AND (<i>“Stress, Psychological”</i> OR <i>Anxiety</i> OR <i>Depression</i> OR <i>“Mental Health”</i> OR <i>“Anxiety Disorders”</i> OR <i>“Depressive Disorder”</i> OR <i>“Occupational Stress”</i> OR <i>“Psychological Distress”</i> OR <i>“Mental Fatigue”</i> OR <i>“Burnout, Psychological”</i>))

* MEDLINE results were excluded from the Virtual Health Library (VHL) search to avoid duplication, as they were analyzed directly via PubMed. Search strategies were executed on August 30, 2024. Source: Developed by the authors (2026).

Study selection was performed in sequential stages. First, duplicate records across the databases were identified and removed. Then, two independent reviewers (RMRS and RLCT) screened the titles and abstracts in a blinded manner.

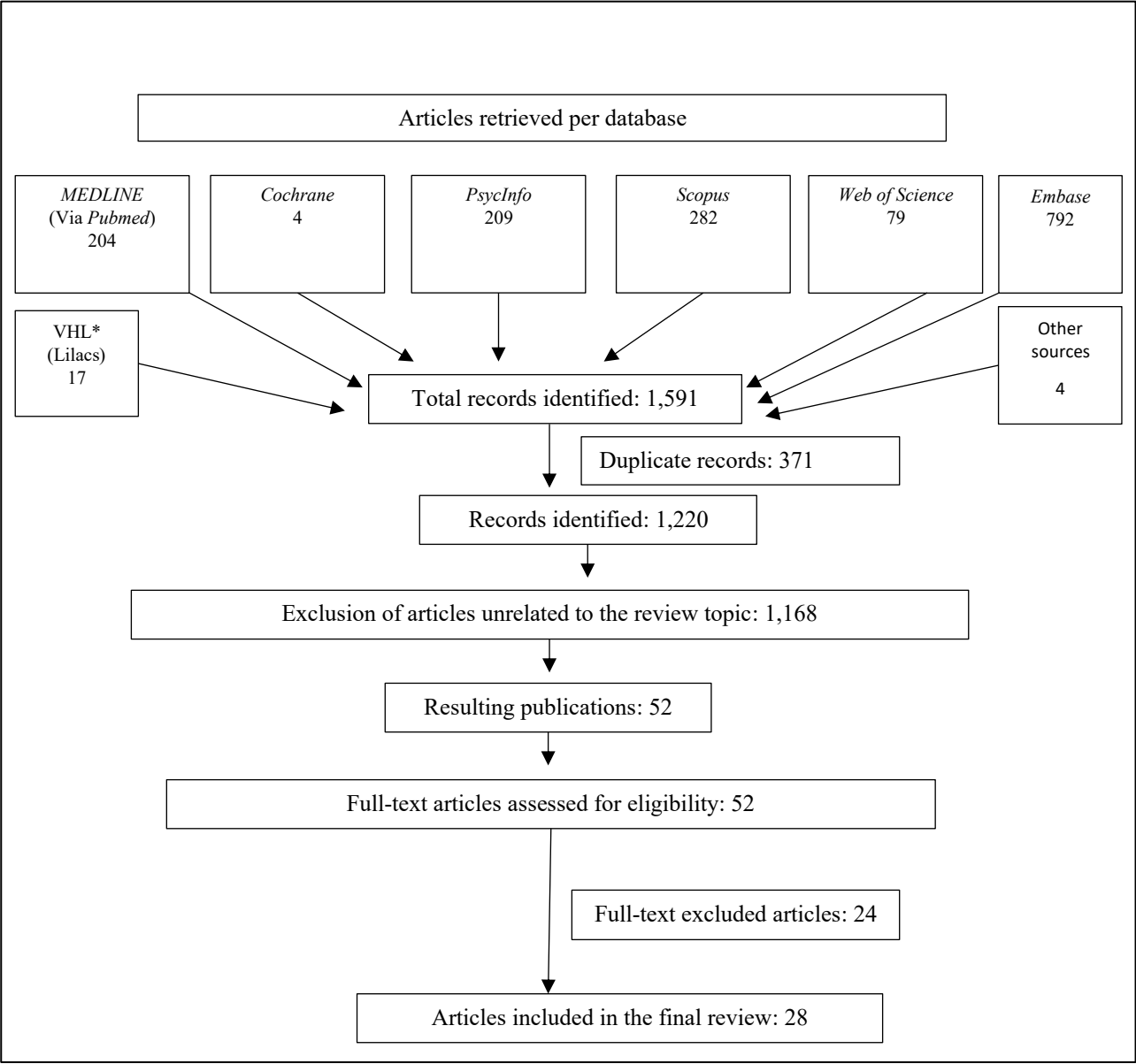
Study screening, organization, and categorization were facilitated using the Rayyan software. Any discrepancies between the reviewers during this phase were resolved through consensus. Following this initial screening, the full texts of the provisionally selected articles were retrieved via the CAPES (Brazilian Federal Agency for Support and Evaluation of Graduate Education) Periodicals Portal and independently reviewed by both researchers. The final inclusion of studies was determined based on their direct relevance to the research objectives and the methodological rigor of the reviewed literature.

Additionally, data extraction encompassed the following variables: author(s), study design, target population, country of origin, questionnaires and/or psychometric scales utilized to evaluate motivations for choosing medicine and/or mental health impacts on students, and the primary conclusions of the included studies.

RESULTS

A total of 1,591 articles were initially identified, from which 28 studies were selected for full-text reading and inclusion in the review (Table 2).

Table 2. Flow diagram of the study selection process.



Source: Developed by the authors (2026). * Virtual Health Library (VHL); LILACS (Latin American and Caribbean Health Science Literature).

The data extracted from the included articles were synthesized descriptively to identify common patterns and discrepancies across the literature. This synthesis explored both individual-level factors and socioeconomic or academic influences that affect students' career choices in medical school.

Out of the 28 studies included in this integrative review, 18 used a cross-sectional design. Also, there were seven qualitative studies (comprising literature reviews, discourse analysis, and Bardin's content analysis), two longitudinal studies, and one clinical practice report. The target populations consisted predominantly of medical students (25 studies) across various academic stages, from first-year students to those in their 12th semester (final year). The remaining cohort involved prospective medical

applicants or aspiring students (three studies). Regarding geographical distribution, 12 studies were conducted in Brazil, while Australia, the United Kingdom, and Turkey contributed two articles each. Germany, Angola, Canada, China, Hungary, India, Serbia, and Portugal recorded one study each, while one study evaluated students from both Brazil and Portugal.

To assess the motivating factors driving students to pursue medicine, most of the articles utilized questionnaires and interviews administered at different timelines: before university admission and during undergraduate training. Beyond questionnaires and interviews, two studies were notable for their use of psychometric scales: Monteiro et al. (2010) applied a Likert scale to evaluate factors influencing medical career choice, and Griffin and Hu (2019) used the Family Influence Scale. Overall, 23 articles identified altruism as the primary motivational factor for pursuing a medical career (Griffin & Hu, 2019; Monteiro et al., 2010).

Regarding the adverse impacts of choosing a medical career on mental health, 19 out of the 28 studies directly evaluated mental health outcomes, such as depressive symptoms, anxiety, insomnia, and burnout, using validated, specific instruments. Deng et al. (2021) utilized the Generalized Anxiety Disorder 7-item scale (GAD-7) and the Insomnia Severity Index (ISI) to assess anxiety and insomnia, respectively and Grace (2018) employed the Center for Epidemiological Studies Depression Scale (CES-D) to evaluate depressive symptoms, and the Maslach Burnout Inventory-Student Survey (MBI-SS) to assess academic burnout (Deng et al., 2021; Grace, 2018). Györfi et al. (2016). Also, Pagnin et al. (2013) measured burnout using the MBI-SS framework. However, other studies evaluated mental health outcomes indirectly through open-ended interviews, discourse analysis, content analysis, and alternative questionnaires that were not primarily designed to diagnose these disorders (De Matos et al., 2019; Györfi et al., 2016; Pagnin et al., 2013; Tanaka et al., 2016).

Data regarding (i) study designs and target populations; (ii) country of origin; (iii) methodology; and (iv) primary conclusions were synthesized and are detailed in Tables 3, 4, and 5.

Table 3. Data extracted from studies conducted in Brazil.

Authors	Study design and population	Methodology	Conclusions
De Matos et al. (2019)	Qualitative research with first-semester medical students	Underlying Discourse Explication Method, involving 77 first-semester medical students, of whom 67 answered a questionnaire, and 10 underwent individual interviews	The primary reasons for choosing medical school were associated with personal fulfillment, altruism, and the job market, in that order of frequency, with responses commonly encompassing multiple reasons. The study notes that external expectations intensify pressure on students, potentially inducing psychological distress.
Corrêa et al. (2016)	Cross-sectional study with medical students from the 1st to 10th semesters who already held degrees in other higher education fields	A questionnaire with open-ended and closed-ended questions was used. Descriptive analysis was performed for quantitative data, and content analysis was applied to qualitative data	The choice of a medical career was driven by better remuneration, market placement, the pursuit of a lifelong dream, personal fulfillment, and the social status of the profession. The study does not address the impact of medical career choice on student mental health.
Kamijo et al. (2021)	Cross-sectional study with medical students from the 1st to 12th semesters (phases)	A questionnaire was administered to 308 students, focusing on variables that addressed the reasons for choosing medicine as a career, concerns regarding their future post-graduation, their desired field of medical practice, anticipated professional challenges, and characteristics deemed essential for the medical profession	The primary motivations for choosing medicine as a career were altruism, financial stability, and personal fulfillment. The study does not address the impact of medical career choice on student mental health.
Azevedo et al. (2005)	Literature review	The review was based on an analysis of prior studies and interviews conducted with physicians and medical students. Furthermore, specialized literature addressing vocation, career choice, and the psychological and emotional challenges of medical students was incorporated	The study concludes that the choice of a medical career is determined by factors such as vocation, family influence, interest in science and biology, and the desire to serve and alleviate suffering. It also highlights that, as a consequence of this choice, students report reduced time for personal and social relationships, alongside identity crises.

Note. Source: Developed by the authors (2026). For publication identification, refer to the Authors column.

Table 3. Data extracted from studies conducted in Brazil.

Authors	Study design and population	Methodology	Conclusions
Pagnin et al. (2013)	Cross-sectional study with medical students	Questionnaires were administered to medical students to identify their motivations for the career choice. Psychometric scales were used to measure burnout and stress levels. Motivations for entering medical school were analyzed	The primary motivations for career choice were intellectual curiosity, professional autonomy, altruism, and an interest in human relationships. Regarding stress outcomes, students motivated by experiences involving illness or death exhibited the highest risk of academic burnout.
Ribeiro et al. (2011)	Qualitative study with fifth-semester medical students	Open-ended essay questions regarding career choice and plans were developed. Responses were evaluated using content analysis, wherein researchers categorized and tabulated the data, computing percentages and highlighting significant verbatim excerpts	Reported motivations included: helping and serving others or working with people, employability, high salaries, social status, third-party influence, scientific curiosity, childhood fantasies or dreams, affinity for biological sciences, diversity of medical specialties, the challenge of the university entrance exam, physician power, and working in healthcare. Students reported psychological distress and pressure regarding their careers.
Tanaka et al. (2016)	Cross-sectional study with second-year medical students	A semi-structured questionnaire assessing sociodemographic data alongside personal and academic experiences was administered to approximately 38 students	The choice of medicine was driven by an affinity for the healthcare field, the desire to help others, professional status, and financial remuneration. Reported consequences included stress, adaptation difficulties, and feelings of homesickness and loneliness, highlighting a critical need for socio-psychological support mechanisms.
Trindade e Vieira (2009)	Qualitative study with medical students at the beginning of the basic science cycle	The sample comprised 90 students within their first two months of medical school. Data collection utilized questionnaires with open- and closed-ended questions addressing motivations, expectations, and the importance of psychological support. Bardin's content analysis was applied	The reported motivations involved both conscious and unconscious factors, encompassing themes such as humanism, social status, and financial independence. As a consequence, the study highlights doubts, frustrations, and anxiety related to learning expectations.
Moreira et al. (2006)	Qualitative study with medical students	Semi-structured interviews were conducted with approximately 30 medical students. A free association technique was utilized to investigate motivations for career choice and perceptions of academic experiences. Data were evaluated using thematic content analysis	Identified motivations included family influence, the pursuit of financial independence, identification with the profession, social status, and the desire to help others. Consequently, the study highlights psychological distress, loneliness, and other emotional difficulties.
Millan (2005)	Cross-sectional study with medical students	A socioeconomic questionnaire, face-to-face interviews, and perception and personality tests were utilized. A total of 163 students participated in the study, of whom 60 (30 of each sex) were selected for in-depth interviews. Data collection and analysis aimed to understand student motivations and characteristics regarding medical career choice	The study concludes that medical vocation transcends gender. The primary motivations cited were altruism, interest in human relationships, intellectual curiosity, and third-party influence. Regarding the impact of this choice, a higher incidence of disorders such as anxiety, depression, and suicidal ideation/behavior is reported during medical training.

Note. Source: Developed by the authors (2026). For publication identification, refer to the Authors column.

Table 4. Data extracted from studies conducted in Australia, the United Kingdom, and Turkey.

Authors	Study design and population	Country	Methodology	Conclusions
Griffin e Hu (2019)	Longitudinal study with medical students	Australia	A 5-year longitudinal study followed 361 applicants across three timelines: Time 1 (pre-selection), Time 2 (end of the first year), and Time 3 (end of the fifth year). Data were collected on demographics, family influence, values, well-being, and career intentions, including academic grades, career attitudes, and practice preferences	The primary motivations for choosing medicine were parental expectations, career prestige, and the desire to care for others. Conversely, this career choice can adversely impact mental health, inducing long-term emotional exhaustion.
Hume e Wilhelm (1994)	Cross-sectional study with medical students	Australia	The study recruited 30 to 35 medical interns per year between 1987 and 1990. Semi-structured interviews were conducted at baseline to collect demographic, psychosocial, career choice motivation, and expectancy data. Participants completed questionnaires evaluating depression, stress, and relationships to assess the impact of the internship on mental health and social relations	Students were motivated by intellectual challenge, altruism, and parental pressure. Furthermore, they reported stress, dissatisfaction, and psychological distress as consequences of their career choice.
Martin et al. (2018)	Cross-sectional study with pre-medical students	United Kingdom	Workshops were conducted with students aged 13–14 and 16–17 years to explore perceptions of medical school. The workshops focused on medical school applications, academic life, and broader career themes	This study explored barriers to medical school application, highlighting the need for clearer, more accessible career information. A lack of field-specific knowledge was common, particularly among those lacking access to guidance at home or school. Associated motivations included the desire to help, interest in science and healthcare, and career stability.
McManus et al. (2006)	Cross-sectional study with students at Medlink, a national conference for prospective medical students	United Kingdom	The Medical Situations Questionnaire was utilized as the primary instrument during Medlink, a two-day conference. Analysis of responses revealed four primary motivational dimensions: indispensability, helping people, respect, and science. Contextual factors such as sex, ethnicity, social class, having physician parents, academic performance, and personality traits were also evaluated	The primary motivations identified were the desire to help others, the pursuit of indispensability, respect, and an interest in science.

Note. Source: Developed by the authors (2026). For publication identification, refer to the Authors column.

Table 4. Data extracted from studies conducted in Australia, the United Kingdom, and Turkey.

Authors	Study design and population	Country	Methodology	Conclusions
Karaoglu, Seker (2010)	Cross-sectional study with first- and second-year medical students	Turkey	Students completed the questionnaire at the end of a lecture, outside of pre-examination periods, to avoid anxiety-related bias. The instrument collected demographic data and included open-ended questions regarding motivations and expectations toward a medical career. Anxiety and depression were evaluated using a 14-item psychometric scale. Motivations for choosing medicine were categorized into job security, external pressures, and the ideal of being a physician. Expectations were classified into prestige, economic factors, and occupational satisfaction	Job security and prestige represented the primary motivations for choosing medicine. Approximately 20.3% of the students exhibited anxiety symptoms, while 29.3% demonstrated depressive symptoms. The study concluded that medical schools must understand students' demographic profiles, decision-making factors, and expectations to better guide them, particularly in systems with restricted applicant selection, such as Turkey.
Terzi et al. (2022)	Cross-sectional study with medical students	Turkey	This study was conducted during the COVID-19 pandemic. Online data collection utilized a questionnaire assessing sociodemographic characteristics and motivations for choosing medicine, alongside the Hospital Anxiety and Depression Scale (HADS) and the Beck Hopelessness Scale (BHS)	The primary factors driving medical career choice were economic, extrinsic (external pressures), and intrinsic (personal interest and altruism). Career choice consequences encompassed anxiety, depression, and hopelessness. Furthermore, the study concluded that students who make career choices aligned with their personal ideals and goals exhibit a positive impact on their mental health.

Note. Source: Developed by the authors (2026). For publication identification, refer to the Authors column.

Table 5. Data extracted from studies conducted in other countries.

Authors	Study design and population	Country	Methodology	Conclusions
Monteiro et al. (2010)	Cross-sectional study with medical school applicants	Angola	A 62-item questionnaire was administered to 1,815 applicants taking the entrance examination at the Faculty of Medicine of Agostinho Neto University. Sociodemographic characteristics and factors influencing medical career choice were evaluated	Applicants were primarily motivated by altruism and vocation. In parallel, social and economic considerations, notably social prestige and job market opportunities, were also prominent.
Attema et al. (2023)	Cross-sectional study with medical students at different training stages	Germany	The experimental setup comprised a simulation in which medical students acted as "physicians" choosing between two treatment options for "patients." Decisions involved monetary trade-offs between personal profit and patient benefit, which were converted into real donations for cataract surgeries to directly affect actual patient health. Following the choice tasks, participants completed a post-experimental questionnaire gathering demographic data, personality traits, and social preferences. A control group of non-medical students was included to evaluate whether altruistic behaviors were specific to medical education	On average, 56.3% of decisions were patient-centric, with first-year students demonstrating the highest levels of altruism. The study concluded that altruism is a significant indicator of students' career choices, underscoring the importance of directly capturing altruism in medical practice.
Paris e Frank (1983)	Cross-sectional study with first-year medical students	Canada	A questionnaire was administered to investigate the association between family illness history and medical career choice, utilizing law students as a control group. The survey assessed family experiences with disease, age at exposure, and parental occupations. The study accounted for subtle psychological factors influencing career decisions while maintaining survey relevance across both groups	Primary motivations included parental influence and pressure, the desire to help others, and childhood experiences, such as dealing with family illness.

Note. Source: Developed by the authors (2026). For publication identification, refer to the Authors column.

Table 5. Data extracted from studies conducted in other countries.

Authors	Study design and population	Country	Methodology	Conclusions
Deng et al. (2021)	Cross-sectional study with medical students	China	Snowball sampling was employed using a questionnaire, and participants received their screening results upon survey completion. The study included students aged 18 years and older, and symptoms of depression, anxiety, and insomnia were assessed	Results showed that the choice of a medical career was influenced by intrinsic factors, such as personal desires and interests. It was also found that medical students exhibited symptoms of anxiety and depression,
Győrfy, Birkás, Sándor (2016)	Cross-sectional study with medical students	Hungary	A questionnaire assessed physical and mental health, health behaviors, stress burden, and coping strategies among Hungarian medical students, alongside their professional motivations. The professional motivation list was compiled from published research findings and a pilot study, and burnout levels were also measured	Altruistic motivation was highly evident, alongside extrinsic motivations such as obtaining a degree, securing employment, and accessing career opportunities. It was found that stress related to examinations, workload, and concentration difficulties can lead to mental exhaustion (burnout).
Grace (2018)	Longitudinal study with freshman and sophomore pre-medical students	United States	Interest in a medical career was assessed at two research time points (Time 1 and Time 2) using a 0 to 10 scale. Depressive symptoms and mental exhaustion (burnout) were evaluated. Additionally, a sociodemographic questionnaire collected data on sex, academic year, race/ethnicity, academic performance, and parental education	The article does not address motivations for choosing medicine; rather, it focuses on the heightened levels of depressive symptoms and burnout among students.
Gazibara et al. (2019)	Cross-sectional study with first- and final-year medical students	Serbia	A total of 570 first-year and 400 sixth-year students participated in the study. The instrument used was a questionnaire covering demographic characteristics (age, gender, place of residence before and during medical school, and grade point average) and questions regarding reasons for studying medicine, specialty preferences, preferred town size for future practice, employment sector (public, private, or both), and intentions to work abroad. Participants were also asked about the importance of various factors when choosing a job position and whether they would choose medicine again	The primary motivation was to help others. First-year students specifically highlighted "good income" and "social status". Regarding the impact of this choice, students cited stress; it was concluded that self-perceived stress during undergraduate medical training can influence future career choices.
Gonçalves-Pereira et al. (2013)	Cross-sectional study with medical students	Portugal	The study included first-year medical students. Participants completed questionnaires covering sociodemographic data, motivations for choosing a medical career, and empathy assessments	The main motivations were caring for people and social commitment.

Note. Source: Developed by the authors (2026). For publication identification, refer to the Authors column.

Table 5. Data extracted from studies conducted in other countries.

Authors	Study design and population	Country	Methodology	Conclusions
Cunha et al. (2021)	Qualitative study with medical students	Brazil and Portugal	This multicultural, exploratory, qualitative study aimed to address questions regarding the domain of meanings, values, attitudes, and reasons underlying the participants' perceptions. The sample comprised 17 Portuguese medical students and 14 students from a Brazilian university. Open-ended interviews were conducted using the guiding question: "Why did you decide to study medicine?" The transcribed interviews were analyzed in depth using Bardin's Content Analysis	Primary motivations were intrinsic, including a willingness to help others.
Harris (2018)	Literature review	Not applicable (review article)	The study method involved a historical and sociocultural analysis of medical professionalism, examining the evolution of societal expectations and the repercussions of medical negligence cases. The work addressed the definition of altruism and its relevance in contemporary medical practice, gathering perspectives from physicians and educators on whether to retain or abandon the term. Arguments for and against altruism as a core component of professionalism were evaluated, culminating in a proposed new ethical framework for medicine	The article synthesized motivations, reporting altruism, professional status, autonomy, interest in science, and career prospects as the primary drivers. Reported impacts of choosing a medical career included burnout, adverse mental health outcomes, and suicide risk.

Note. Source: Developed by the authors (2026). For publication identification, refer to the Authors column.

DISCUSSION

Understanding the factors that motivate individuals is crucial, as they can significantly influence the educational process, professional satisfaction, and career choices. These motivational factors may be influenced by circumstances occurring as early as school age. A study conducted in the United Kingdom sought to explore, through group discussions, the barriers preventing school students aged 13–14 and 16–17 years from entering a medical career. The primary obstacles identified were the competitiveness of the application process, concerns regarding the length and financial costs of the course, and uncertainties about academic content and challenges. Many students also reported a lack of clear understanding regarding what a medical career entails, with an emphasis on uncomfortable aspects such as exposure to blood and responsibility for human lives. This study noted that some students felt unprepared, primarily due to a lack of adequate information and school support. The lack of proper information was a recurrent challenge, even for teachers, highlighting the need for greater knowledge to properly guide students (Martin et al., 2018).

Another study conducted in the United Kingdom was administered to 2,867 participants attending *Medlink*, a two-day national conference for prospective medical school applicants. The study utilized a questionnaire that demonstrated associations between motivations to study medicine and variables such as gender, ethnicity, social class, personality traits, and learning styles. Factors influencing the choice of medicine as a career among students were investigated, evaluating interest in different aspects of medical practice. Four main motivational dimensions were identified: indispensability, helping people, respect, and science. The study concluded that although the questionnaire may serve as a reliable tool for assessing candidate motivations, it requires adjustments before implementation in vocational guidance and selection procedures (McManus et al., 2006).

Some authors categorize the motivations driving a medical career as conscious or unconscious, including humanism, affinity, social status, cultural image, utility, transcendence, knowledge, and financial Independence (Trindade & Vieira, 2009). In contrast, other authors classify them into two groups: intrinsic factors, such as altruism (the desire to help others without expecting reciprocity) and interest in science, biology, or medicine; and extrinsic factors, such as the pursuit of wealth, seeking a prestigious profession, family pressure, or following the experience of witnessing the illness or death of a loved family member (Terzi et al., 2022).

Cunha et al. (2021) demonstrate that motivation is addressed through various theoretical frameworks; However, none are universally accepted or fully capable of explaining the complexity of human nature and its behavioral aspects. According to these authors, Self-Determination Theory is the most widely accepted framework in medical education literature, which conceptualizes motivation from two perspectives: extrinsic and intrinsic. In extrinsic motivation, anticipated outcomes, such as rewards or punishments, drive individual behavior, whereas in intrinsic motivation, the driving force stems from engaging in activities that are inherently interesting or enjoyable (Cunha et al., 2021).

Understanding motivational factors is crucial because motivation significantly influences the educational process, professional satisfaction, and career choices (Terzi et al., 2022). Literature supports that motivation has a substantial impact on individual choices and decision-making processes. Furthermore, studies highlight that the choice of a medical career can impact

mental health, which is a critical concern. Consequently, the discussion was structured into thematic subtopics based on the central core idea of each topic.

Professionalism

From a humanistic perspective, there are overlaps between the motivation for career choice and professionalism, although research regarding this relationship remains limited. Nonetheless, existing studies report a consistent correlation between attitudes and behavioral choices. This suggests that the motivation for career choices may be linked to professionalism among undergraduate medical students (Shi et al., 2024)

According to Shi et al., professionalism serves as the cornerstone of the medical profession, holding critical importance within both the clinical and personal spheres of physicians, as well as in professional ethics and responsiveness to societal expectations. Their research indicates a lack of consensus regarding the precise definition of professionalism; however, they adopt the definition of "commitment to carrying out professional responsibilities and adherence to ethical principles." For these authors, most definitions of professionalism encompass a broad spectrum of perspectives, including values, attitudes, and behaviors (Shi et al., 2024).

The literature highlights that the most frequently cited components of professionalism include altruism, accountability, excellence, duty, honor, integrity, and respect for others. This indicates a direct influence on the physician-patient relationship, particularly concerning patient satisfaction, the quality of healthcare delivery, and patient safety (Shi et al., 2024).

Considering communication skills essential for optimal medical practice, examining professionalism and empathy becomes particularly timely due to their favorable clinical outcomes. Research underscores professionalism and empathy as essential elements within the clinical setting, grounded in the premise that empathetic attitudes and altruistic motivations are expected competencies in medical education. However, the authors noted a scarcity of empirical data in their study (Gonçalves-Pereira et al., 2013).

From the onset of their training, students bear the weight of a physician's social responsibility, perceiving it either as a challenge or, at times, as a threat. Practical activities, particularly those involving direct patient contact and simulating future responsibilities, place the highest demands on emotional resources, functioning as daily stressors borne by these students.

Altruism

The *Houaiss Dictionary of the Portuguese Language* (2009) defines altruism as an instinctive tendency or inclination that prompts human beings to show concern for others. Similarly, the *Michaelis Dictionary* defines altruism as spontaneous love for others, selflessness, philanthropy, and neighborliness (*Altruismo* | *Michaelis On-Line*, 2024).

Observations on this topic have shown that altruism and family represent two of the most critical motivators for selecting a medical career. Among the various motivations underlying career choice, several authors consider altruism to be the primary driver across diverse populations (Gazibara et al., 2019).

Altruism was highlighted as a primary motivational factor in the literature between the 1950s and 1970s. Even in 21st-century medicine, altruism continues to be identified as a leading motivation for entering the profession (Györfy et al., 2016). It is argued that a lack of altruism may constitute a risk factor for diminished academic performance, whereas its presence fosters the development of the professional self (Györfy et al., 2016).

In a study conducted at the Faculty of Medicine of the University of Belgrade, Serbia, aimed at analyzing attitudes and potential differences between students at the beginning and end of medical training, this desire to help others emerged as the most prominent motivation for both first-year and sixth-year undergraduates, within a cohort of approximately 570 first-year and 400 sixth-year students (Gazibara et al., 2019).

A study conducted at the University of São Paulo Medical School in 2003 addressed contemporary trends regarding the commercialization of medicine, which alienates physicians from one of their core attributes, altruism, by introducing market-driven dynamics and the persona of the "businessman." This shift poses potential risks to patients, as medical responsibilities risk being superseded by market rules devoid of ethics (Millan, 2003; Millan et al., 2005).

The authors argue that medicine is inherently an altruistic profession, where the satisfaction derived from helping and healing patients takes precedence over financial remuneration, although this ideal is not always realized. They emphasize that altruism with discretion, neutrality, and empathy toward the patient, represents desirable traits for medical practitioners. Nonetheless, these attributes are not universal, given that all individuals possess personal conflicts and imperfections (Millan, 2003; Millan et al., 2005).

Several studies suggest that altruism is essential to physician behavior, noting that the concept of the benevolent physician remains deeply embedded in medical practice and ethics, which is grounded in the Hippocratic Oath.

Investigating the evolution of this disposition, an experimental study conducted in Germany identified substantial heterogeneity in altruistic preferences throughout undergraduate training. Altruism towards patients was highest among first-year students, significantly declined during the intermediate years, and demonstrated a tendency to recover in the final year, coinciding with clinical practice immersion. The authors found that patient-centered altruism reaches its maximum level among freshmen, experiences a marked decline during intermediate training periods, and tends to rise again in the final year following integration into clinical clerkships. Furthermore, this altruistic orientation was more pronounced among female students, those from lower-income backgrounds, and individuals inclined toward specialties such as pediatrics and surgery (Attema et al., 2023).

Some scholars contend that genuine altruism may not be achievable within the medical profession due to the financial compensation received for services rendered. Harris (2018) argues that practicing medicine without due regard for one's own well-being can lead to heightened burnout among physicians. It is hypothesized that within the contemporary biomedical model, the commercial transaction aspect represents a significant confounding or opposing factor to altruism; nevertheless, researchers emphasize that this does not invalidate the presence of humanism, patient-centered focus, compassion, or attentiveness among medical practitioners (Harris, 2018).

Although medical altruism is essential for humanized care, it may intensify psychological strain on healthcare professionals, who frequently face extended working hours and high emotional burdens. This environment needs a continuous balance between the drive to help,

emotional resilience, and professionalism, a triad that becomes indispensable for managing workload in a sustainable and responsible manner.

Several authors have discussed the role that altruism may play in other processes related to medical careers, such as burnout, with debate regarding the presence or absence of a direct correlation between altruistic motivation and burnout levels. However, researchers noted that altruism, representing a robust intrinsic motivator, could potentially confer a protective effect against the hardships of university life, aiding students in navigating academic challenges (Györfy et al., 2016).

Other studies demonstrate that altruism maintains a prominent position as a primary factor in medical career choice, followed by motivations related to extrinsic gains, such as obtaining a degree and high employability, which will be addressed subsequently (Györfy et al., 2016).

Gains: Economic, Prestige, Social, and Intellectual Status

The medical profession offers desirable factors for both prospective and current medical students, including economic prospects, prestige, social status, and intellectual growth. An evaluation of medical students in their entry and final years revealed that both cohorts identified opportunities for promotion and work-life balance as the most critical factors when selecting a future position. Although these extrinsic and lifestyle factors are secondary to primary intrinsic motivators such as altruism, they were among the most frequently cited motivations (Gazibara et al., 2019).

In a study involving approximately 970 medical undergraduates from first to sixth year at the University of Belgrade, Serbia, Gazibara et al. (2019) demonstrated that financial compensation significantly elevates the expectations of medical aspirants. This finding was particularly pronounced among early-year students compared to their senior counterparts; first-year students cited "high income" and "social status" as primary motivators for entering medical school. These variations may reflect cultural nuances across populations. It is suggested that personal values play a key role and that expectations regarding financial return, lifestyle, career progression, and professional prestige tend to decline progressively across the initial years of medical training (Gazibara et al., 2019).

Although intellectual challenge, desire to teach, and research engagement may not constitute primary motivators for entering medicine, these factors significantly influence career choices. A qualitative study comparing 17 Portuguese medical students from a public university and 14 Brazilian students from a private institution in Northeastern Brazil highlighted notable cross-cultural differences. Utilizing Bardin's Content Analysis to evaluate narrative data, the authors found that viewing medicine as a scientific domain, driven by "scientific interest in medicine and curiosity regarding human body functions", ranked as the second most frequent motivator among Portuguese students and the fourth among Brazilian students (Cunha et al., 2021). Similar patterns were observed in qualitative research in the Netherlands and quantitative studies across Norway, Spain, and the United Kingdom, where scientific interest and the desire to help others emerged as leading motivations for selecting a medical career (Cunha et al., 2021).

Despite these perceived gains, Ribeiro et al. (2011) observed a growing emphasis among students on medical specialization and quality of life concerns, a trend well-documented across medical education literature. Although future career pathways remain tentative for some undergraduates during early training phases, the anticipation of medical residency choice imposes

substantial pressure. This competitive landscape generates considerable psychological distress, further compounded by the perceived need to build a targeted "parallel curriculum" early in undergraduate studies.

From another perspective, medical students perceive intellectual growth, autonomy, and altruism as significant gains. However, students whose career choices were motivated by personal or familial experiences with disease exhibited higher vulnerability to mental health disorders (Pagnin et al., 2013). Complementing these findings, other studies have underlined intellectual challenge as an important driver for entering the medical profession (Deng et al., 2021).

Career choice is frequently not fully explicit to the individual. A qualitative Brazilian study using content analysis was conducted at the Federal University of Minas Gerais (UFMG) School of Medicine with fifth-semester students to investigate explicit and implicit motivations for entering the professional cycle. Among explicit factors, following altruism, employability, rapid market insertion, and high earning potential were unexpectedly the most frequently cited motivators (Ribeiro et al., 2011). Furthermore, the study demonstrated that many choices were guided by intuitive feelings or family influence, a topic explored in the subsequent section.

This scenario of motivation-related vulnerability highlights a clear conflict between idealized or commercialized views of the profession and contemporary higher education models, which prioritize academic productivity demands and early hyper-competitiveness. Institutional and social pressure for exemplary performance, combined with the self-imposed necessity to construct a "parallel curriculum", rich in publications, academic societies, and extracurricular clerkships, acts as a major chronic stressor. This productivity-driven dynamic erodes the humanistic dimension of medical pedagogy, transforming the university environment from a space meant for biopsychosocial development into one characterized by constant surveillance and high stakes. Consequently, this exacerbates burnout rates and alienates students from their initial vocational aspirations.

Family Influence

Family influence on choosing medicine as a profession is well-documented, as multi-generational medical families historically exist, driven by identification with relatives who practice or have practiced medicine. Parents sometimes want their children to become physicians based on various reasons, including projecting their personal aspirations onto them (Millan, 2003), and other contextual factors like having a sick relative.

Parental pressure, the desire to help others, and childhood experiences, such as confronting family illness, are frequently highlighted across literature. Research shows a significant connection between the occupations of parents and the career choices by their children. A direct and significant influence on choosing medicine was observed in children of physicians. Conversely, the presence of extended family members in medicine showed no significant association, whereas law students demonstrated a relevant link with having an attorney in the family, even if not an immediate relative, suggesting that family influence varies across professional domains (Paris & Frank, 1983).

Entering medical school may also relate to personal experiences with illness within the family, particularly among male students without physician parents, suggesting a potential "reparative application." Similarly, law students report higher rates of family legal issues, reinforcing how personal experiences shape career decisions. However, study limitations highlight

the need for longitudinal research to confirm these associations and further clarify the dynamics guiding career choice, especially within health professions (Paris & Frank, 1983).

Family substantially impacts on career decisions, with parents' expectations being particularly prominent in certain non-Western cultures. This phenomenon appears more marked among younger medical aspirants and those from non-Western backgrounds (Griffin & Hu, 2019).

Griffin & Hu (2019) reported that medical undergraduates who face high parental expectations tend to develop more negative attitudes toward pursuing a career in medicine. Moreover, these expectations were indirectly associated with academic burnout among senior students. Such negative outcomes contrast sharply with parental expectations regarding the prestige inherent to the medical field (Griffin & Hu, 2019).

While studies consistently rank altruism as the primary driver over family influence or imposition, evidence suggests that altruism remains prominent throughout both entry and final years, whereas explicit family influence is more frequently reported by senior undergraduates (Gazibara et al., 2019).

In a study conducted at the University of Wisconsin Medical School involving 304 students, 36.5% chose medicine due to a desire to help others combined with scientific interest, 19% sought to work in health-related fields, 4.3% based their choice on personal illness experiences, 2.6% cited a missionary orientation, and 2% were influenced by the death of a close relative or friend. Family-related factors were highly represented: 63% had a family member working in healthcare, 17.4% had a physician father, and 11% reported being influenced by family physicians (Millan, 2003).

Millan et al. (1999, as cited in Ribeiro, 2014) highlighted the protective role of family during student crises, noting that fear of disappointing parents or facing reprisal can severely compound personal and academic distress. These authors argue that undergraduate crises yield better prognoses when cushioned by familial support (Ribeiro, 2014).

Medical students perceiving high parental pressure to pursue a prestigious career aligned with family or cultural values may experience ambivalence upon entering medical school. This pressure contributes to an increased risk of burnout over time, although limited evidence connects this ambivalence directly to lower academic performance (Griffin & Hu, 2019).

Gender Reflections on Medical Career Choice

Investigations into gender influence reveal a growing feminization of medical education. In a sample of 308 medical students, women comprised 63.3% of the cohort when mirrored by other studies reporting 74.4% and 53% female participation (Monteiro et al., 2010; Moreira et al., 2006). Historical analyses by Kamijo et al. (2021) indicate that female enrollment began rising steadily in the 1970s, accelerating during the first decade of the 21st century (Kamijo et al., 2021).

Analyzing gender distribution across higher education reveals marked asymmetries between academic disciplines. While medicine exhibits a rapid demographic transition with increasing feminization within a historically male-dominated, high-prestige, and high-return domain, teacher education programs demonstrate opposite dynamics. In non-medical fields, women are historically predominant in caregiving and basic education roles, fields lacking comparable market valuation or social prestige. This contrast demonstrates how extrinsic

motivators and the epistemological status of careers differentially shape youth subjectivity, professional expectations, and university experiences.

Historically, women have been excluded from practicing medicine for centuries, with some rare exceptions in ancient China, medieval Italy, and Germany. In the mid-19th century, James Barry (born Margaret Ann Bulkley) famously disguised herself as a man to enter the British Military Medical Corps. She achieved a distinguished career before her true biological sex was revealed posthumously (Margotta, 1998).

Women were long stereotyped as emotionally unsuited for medical practice, with formal access expanding only in the late 19th century, exemplified by Elizabeth Blackwell's persistent efforts before securing entry into US medical schools (Margotta, 1998; Millan, 2003).

Towards the end of the 19th century, records document the emergence of medical schools exclusively for women; however, these institutions were marginalized and subject to discrimination. To submit research and scientific manuscripts and to compete for awards, their works had to be signed using pseudonyms. Opportunities for admission to reputable hospitals or entry into certain specialties were nearly non-existent. However, during wartime, if they accepted, they were hired as nurses. Only in the second half of the 20th century women gradually began to establish a stronger presence in the profession. Despite achieving superior academic and professional outcomes, they continued to face discrimination, according to the authors' observations (Margotta, 1998; Millan, 2003).

Frequently, female physicians earn lower salaries, lack adequate visibility among patients, and experience subtle exclusion from specific medical specialties. They tend to delay pregnancy and have fewer children compared to the general population, participate less in academic life and scientific publishing, receive significantly less support from superiors, and experience slower or almost non-existent career progression (Millan, 2003; Petrucelli & Lyons, 1997).

This gender asymmetry was also documented in a cross-sectional study conducted in Hungary, which linked motivational factors to the development of burnout. Findings demonstrated that although altruistic inclination was significantly higher among female students, they ultimately suffered higher rates of emotional exhaustion at higher levels than those of male peers, despite exhibiting equivalent rates of academic efficacy (Györfy et al., 2016).

In the same study, one-third of male students and half of female students in their final two years of medical school reported their stress as moderate to high levels, alongside with a lower quality of life. However, depressive symptoms were found to be more prevalent among male students (Györfy et al., 2016).

Shi et al. (2024) highlighted that career motivation and professionalism may be influenced by gender. Conducted among 1,421 medical students from second to fourth year, the study revealed that female medical students outperformed male peers in professionalism scores, and third-year students exhibited the lowest level of professionalism, regardless of gender. Female students showed higher intrinsic motivation for career selection than male students. Those motivated by personal interest demonstrated the highest levels of professionalism, whereas students driven by other motivations showed the lowest levels. Consequently, the authors concluded that professionalism levels between genders diverged when evaluated on the basis of distinct career motivators (Shi et al., 2024).

Additional cross-sectional research conducted among Portuguese medical students demonstrated that female students scored higher in empathy and care-oriented attitudes

(Gonçalves-Pereira et al., 2013). The Hungarian cross-sectional study by Györfy et al. (2016) suggests that female students tend to develop an earlier commitment to the medical calling compared to males. This early decision may reflect a more conscious career selection, potentially contributing to a lower incidence of burnout.

Impacts of COVID-19 on Medical Career Choice

The COVID-19 pandemic significantly impacted medical students' mental health. A study involving 389 medical undergraduates evaluated whether the psychological effects of COVID-19 differed among students motivated by distinct factors when choosing the medical profession. While intrinsic motivation included altruism and an interest in science, biology, or medicine, extrinsic sources were primarily related to the pursuit of wealth, seeking a prestigious career, family pressure or expectations, and personal experiences with the illness or death of a loved one. In this investigation, anxiety and hopelessness levels were higher among students driven by extrinsic motivators. Idealistic students interested in medicine experienced fewer psychological issues compared to those who selected the career due to family pressure or external factors (Terzi et al., 2022).

Negative life events, such as the COVID-19 pandemic in 2020, correlated strongly with medical students' mental health status. During this period, shifts in educational patterns further induced psychological distress among undergraduates. A study involving 1,837 medical students, comprising 1,227 females (66.8%) with a median age of 21, demonstrated that 30% of students experienced psychological distress during the pandemic, directly associated with COVID-related stressors. Approximately 68% of undergraduates reported a deterioration in their mental health following the onset of the pandemic. Consequently, both the pandemic and its psychological repercussions influenced individuals regarding their medical careers. According to the authors, these psychological issues may be linked to a loss of interest in a medical career and increased regret over this choice, as well as higher attrition rates among medical students (Deng et al., 2021).

Younger age, lower family income, lower depressive symptoms, reduced exposure to negative pandemic news, and higher post-pandemic satisfaction with their chosen field were associated with a greater willingness to practice medicine. Furthermore, male students who regularly exercised, expressed genuine interest in medicine, paid more attention to positive news, and felt satisfied with their chosen specialization demonstrated a greater readiness to become physicians following the pandemic. As a result, they were more likely to specialize in respiratory medicine and infectious diseases. Conversely, the severity of anxiety symptoms correlated with a reduced willingness to practice within respiratory medicine and infectious disease specialties (Deng et al., 2021).

As previously noted, the COVID-19 pandemic led to significant social and professional transformations, particularly for healthcare workers due to the exhausting and stressful frontline nature of their work, impacting the social perception of aspiring medical students. In this context, shifts in pre-medical students' interest were observed, an aspect explored in this study. A study conducted with 1,695 students across 93 public and private schools in Pakistan reported that, following the onset of the COVID-19 pandemic, significantly more students chose medicine as a career (60.7% vs. 62.9%), alongside a decrease in the proportion of students who were undecided about entering the field (20.2% vs. 17.0%). Another notable finding

from the same study was that students became more likely to be motivated by the altruistic benefits of medicine to society (57.0% vs. 62.7%). However, the risk of contracting severe diseases during clinical practice emerged as a major issue to pursuing the profession (Saleh et al., 2022).

Mental Health Outcomes of Career Choice

Expectations projected onto peers, the medical program, and the profession can lead a contrast between expectations and reality, resulting in psychological distress (De Matos et al., 2019).

Insecurity regarding the chosen career path, academic complaints and dissatisfaction, leave of absence, absenteeism, course failures, competitiveness, substance abuse (alcohol and other drugs), and suicidal ideation serve as conscious or unconscious justifications for the actions and behaviors of medical students. These reflect their frustration when faced with a reality different from the one they envisioned, often leading to psychological symptoms and mental health conditions (Ribeiro, 2014).

By the mid-20th century (1950s), the psychological difficulties faced by medical students were already noticeable, triggering a series of discussions in Europe on the topic to foster a better understanding of this group's mental health (Tanaka et al., 2016).

Until then, it was assumed that the satisfaction of prospective medical students was tied to passing highly competitive entrance exams, achieving the dream of unraveling the human body, the possibility of curing diseases, and attending medical school, one of the most idealized professions in society. However, numerous studies have demonstrated that when expectations regarding medical training are not met, the emergence of depression, anguish, uncertainty, and disillusionment can become a reality as early as the first stages of the program. These conditions may lead to mental disorders across various spectra, including their most severe forms (Tanaka et al., 2016).

Anxiety, Depression, Burnout, and Suicide

Studying the mental health of medical students is crucial, as they will be the future caregivers of patients, often in critical health situations. This is an essential concern for the institutions responsible for training future physicians.

In this context, providing services dedicated to monitoring students' psychological distress throughout undergraduate training is crucial to preventing negative outcomes in this population (Ribeiro, 2014).

Some studies have noted that personal experiences can act as a major driver of career choice, as well as generate expectations and frustrations. Prospective medical students may experience external pressures and high expectations regarding the profession, which tend to exert a significant effect on students' anxiety and depression levels (Karaoglu & Seker, 2010).

Conditions of overload and pressure placed on medical students can lead to a state of exhaustion, resulting in psycho-emotional and physical disorders, such as burnout. This condition is particularly prominent among medical students, characterized by disinterest and lack of motivation regarding their chosen career. However, choosing a medical career is not the sole cause of burnout, suggesting that the study of this condition must extend beyond the university

environment to encompass various factors, including those related to personality (Győrffy et al., 2016).

Literature data have demonstrated evidence of high rates of depression, exhaustion, and suicide among medical students. Additionally, mental health issues have been associated with motivational triggers for dropping out of the program (Grace, 2018). Despite the prevalence of pathological conditions such as anxiety, obsessive-compulsive disorders, depression, and suicide among medical students, these situations do not affect most students as a standard rule (Millan, 2003).

Millan (2012, as cited in Ribeiro, 2014) observed that the factors most frequently highlighted as potential causes of suicide among medical students include psychiatric conditions (particularly depression, substance abuse, and drug dependence), individuals with high levels of self-criticism, frustrations arising from omnipotent idealizations, and difficulties coping with the demanding nature of medical education and its competitive academic environment (Ribeiro, 2014).

Psychological issues and professional satisfaction appear to be independent factors affecting career and medical specialty choices (Deng et al., 2021).

Between 1987 and 1990, 130 medical interns at a teaching hospital in Sydney, Australia, with a mean age of 24 years, were interviewed to explore the factors influencing their career choice and psychological morbidity. Intellectual challenge, altruism, and parental pressure were identified as the main motivators for choosing medicine, although many expressed feelings of regret regarding their career paths. A portion of the interns exhibited expectations about medical practice accompanied by discontentment. According to the study, this dissatisfaction resulted from the lack of intellectual challenges during the internship period. Among the findings, it is also worth noting that although 27% expressed feelings of regret over their choice of medicine, 67% had developed clear career plans by the end of the internship. Improvements in health and a reduction in psychological disorders were observed by the end of the internship period (Hume & Wilhelm, 1994).

A Brazilian cross-sectional study conducted with 277 medical students from the 1st, 2nd, 4th, and 6th years, aimed to identify the motivations behind their career choices. The study used a questionnaire to analyze how motivations could influence burnout levels. The finding revealed that students motivated by personal experiences with illness or death face a higher risk of experiencing burnout. The authors suggest that early identification of these students, who may have at a higher risk of emotional exhaustion, would be beneficial in medical school (Pagnin et al., 2013).

Faced with this panorama of burnout, evidence indicates that managing academic stress cannot be restricted to individual and palliative psychological interventions. From an institutional and pedagogical standpoint, these findings demand an overhaul of student retention policies in Higher Education, requiring medical schools to establish structured support and active listening spaces that accompany students from admission, mitigating the impact of educational pressures and preventing chronic illness outcomes.

FINAL CONSIDERATIONS

The results of this integrative literature review allow us to conclude that motivations for choosing a medical career are influenced by a series of complex, interrelated personal, social, and academic factors: altruism, frequently associated with the desire to help people and positively

impact societal health and well-being; the perception of medicine as a stable and financially rewarding career; intrinsic motivation, such as the desire to make a difference in people's lives; extrinsic factors, such as the pursuit of social status, financial security, and family influences; and prior exposure to the medical environment through volunteer work, internships, or personal experiences.

Understanding these multifactorial motivations behind medical career choices and its psychosocial repercussions is indispensable for informing educational and public health policies within the academic setting. The findings of this integrative review demonstrate that these impacts vary considerably according to individual resilience: while some undergraduate students find a strong sense of purpose, others bear the weight of emotional stress and regret, exacerbated by the discrepancy between initial idealizations and the practical reality of the course. By mapping major contemporary databases, this study synthesizes updated evidence and highlights broad global methodological diversity, whose varied instruments and scales reflect the sociocultural nuances of each surveyed population. Consequently, there is an urgent need for higher education administrators and institutions to transcend a purely reactive care model, investing in continuous pedagogical support and institutional mechanisms that strengthen student retention while balancing high academic demands with the preservation of future professionals' well-being.

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DATA AVAILABILITY STATEMENT

The data underlying the findings of this study are included within the manuscript.

AUTHOR'S CONTRIBUTIONS

Author 1: Substantial contribution to study conception and design, data collection, data analysis, drafting of the manuscript, and critical revision of the final text.

Author 2: Substantial contribution to data analysis and critical revision of the final text.

Author 3: Substantial contribution to study conception and design, data collection, data analysis, drafting of the manuscript, critical revision of the final text, and study supervision.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest regarding the publication of this article.