

Literature Review

Fragile Under Fire: Personality Disorders Underneath Resilience Facade of Medical Students

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Abstracts

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Introduction: Medical students with personality disorders (PDs) often have to present a resilient facade to navigate the intense pressures of their academic and clinical training. These disorders can negatively influence their emotional well-being, academic success, and professional development. This review explores the prevalence, impact, and diagnostic methodologies of PDs among medical students. **Methods:** A literature review was conducted to identify relevant studies from PubMed and Scopus following primary keywords “personality disorder” and “medical student,” investigating the possible effects and manifestation of personality disorders in medical students. **Results:** Medical students had a higher prevalence of PDs (30.2%) compared to the general population (6.1%). Obsessive-compulsive personality disorder (OCPD) is the most prevalent type (21.8%). The impact of PDs, exacerbated by the high stress of medical education, can lead to an increased rate of depression, burnout, and anxiety, which further impact both academic success and career progression. Early intervention, including the use of standardized diagnostic tools such as the DSM-5-TR and ICD-11, can help to identify as well as enhance students’ overall well-being and performance. **Conclusion:** Medical students with PDs face significant challenges that impact their academic performance, emotional stability, and professional relationships. PDs require more extensive targeted mental health support and systemic changes in medical education. While there is no cure for PDs, therapy focusing on symptom management and emotional regulation can improve resilience and success. Addressing stigma and strengthening mental health services, curriculum integration, and peer support networks are essential for better outcomes.

Keywords: Personality Disorders, Medical Students, DSM-5, ICD-11, Mental Health

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INTRODUCTION

Medical education is known for its rigorous demands, encompassing long study hours, intense clinical responsibilities, and an expectation for high academic and professional performance. This high-pressure environment can lead to significant psychological stress that medical students must manage, contributing to or exacerbating underlying mental health issues and increasing vulnerability to personality disorders (PDs) [1]. The main characteristics of PDs are persistent, inflexible patterns of one's behavior and internal experiences, departing from usual or accepted cultural expectations, impairing social, occupational, and other important life functions [2]. PDs in Medical students have a notably higher prevalence than in the general population, with studies showing rates as high as 30.2% [3], far exceeding the global adult average of 6.1% [4]. The most commonly observed PDs among medical students include obsessive-compulsive personality disorder (OCPD) at 21.8%, avoidant personality disorder (AvPD) at 6.7%, and paranoid personality disorder (PPD) at 2.8% [5]. These findings highlight that the stress and demands of medical training are significant contributing factors to the high incidence of PDs in this population.

Emotional instability and maladaptive coping mechanisms associated with PDs can lead to burnout, academic difficulties, and even career termination in severe cases. PDs also often impair interpersonal functioning, which has a direct impact on the fundamental ability to establish trust and communicate effectively with patients [6]. Communication is vital in healthcare as it enhances relationships with patients and teamwork among colleagues, which in turn ultimately fosters self-awareness and empathy. To address this issue, it is essential that medical education institutions enhance access to mental health resources, establish peer support networks, and integrate mental health training into medical curricula to reduce stigma, encourage early intervention, and thus assist med-

ical students gaining a better understanding of how to regulate their own behaviors and emotional responses [7]. Additionally, ensuring that curricula support a healthy work-life balance and promote adaptive coping strategies can equip students with the resilience needed for better well-being and academic success [8].

The purpose of this literature review is to provide a comprehensive analysis of personality disorders in medical students, identifying research gaps and highlighting the implications of PDs for their academic and professional lives. This article also aims to give information about the importance of recognizing and addressing PDs as a tribute to enhance both student well-being and professional resilience. Addressing these factors will improve the academic outcomes and career trajectories of medical students and contribute to their development into competent, empathetic healthcare professionals.

METHODS

A literature review was conducted to identify relevant studies from PubMed and Scopus following primary keywords "personality disorder" and "medical student," investigating the possible effects and manifestation of personality disorders in medical students.

REVIEWS

Definition of Personality Disorders (PDs)

The term "personality" describes the persistent traits and behaviors that make up an individual's own way of adjusting to life [9]. Adaptability refers to the process of drawing insights from previous experiences and suggesting varied responses to diverse situations [10]. This behavior is absent in individuals with personality disorders (PDs), who typically exhibit consistent and rigid responses to various circumstances [11]. This results in an inability to sustain a healthy and appropriate coping mechanism, ultimately leading to feelings of helplessness and frustration in the patient [12].

According to the Diagnostic and Statistical

Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR), a personality disorder is characterized by a personality pattern and associated interior experiences that greatly hinder an individual's capacity to function in social interactions, or the persistent, inflexible patterns of one's behavior. Internal experiences, departing from usual or accepted cultural expectations, impairing social, occupational, and other important life

functions. The PDs are categorized into three separate categories in the guideline: Cluster A, which includes Paranoid, Schizoid, and Schizotypal Personality Disorders; Cluster B, which includes Borderline, Narcissistic, Histrionic, and Antisocial Personality Disorders; and Cluster C, which includes Avoidant, Dependent, and Obsessive-Compulsive Personality Disorders [13].

Table 1. Overview of the DSM-5-TR Classification of Personality Disorders

DSM-5		
Clusters	Code	Label
Cluster A Personality Disorder	301.0	Paranoid Personality Disorder
	301.20	Schizoid Personality Disorder
	301.22	Schizotypal Personality Disorder
Cluster B Personality Disorder	301.7	Antisocial Personality Disorder
	301.83	Borderline Personality Disorder
	301.50	Histrionic Personality Disorder
	301.81	Narcissistic Personality Disorder
Cluster C Personality Disorder	301.82	Avoidant Personality Disorder
	301.6	Dependent Personality Disorder
	301.4	Obsessive-Compulsive Personality Disorder
Other Personality Disorders	301.1	Personality Change Due Another Medical Condition
	301.89	Other Specified Personality Disorder
	301.9	Unspecified Personality Disorder

The ICD-11 classification groups the PDs diagnosis into "mild," "moderate," or "severe," with the proposed domains that consist of Negative Affectivity, Detachment, Disinhibition, Dissociality, and Anankastia [14]. The higher-order trait categories in the Alternative DSM-5 Model for Personality Disorders (DSM-5-AMPD) reasonably correspond to these domains [15]. The borderline pattern is a category that has high similarity with borderline personality disorder (BPD); it does not reflect a single trait, but rather a composite of five traits expressed at varied degrees of intensity [16].

Table 2. ICD-11 Classification and Related Traits of Personality Disorders

ICD-11		
Diagnostic Hierarchy	Code	Label
Unspecified primary diagnosis	6D10.Z	Personality Disorder, Severity Unspecified
Severity classification codes	None	No Personality Disturbances
	QE50.7	Personality Difficulty
	6D10.0	Mild Personality Disorder
	6D10.1	Moderate Personality Disorder
	6D10.2	Severe Personality Disorder
Trait domain specifier codes	6D11.0	Negative Affectivity
	6D11.1	Detachment

ICD-11	
	6D11.2 Disinhibition
	6D11.3 Dissociality
	6D11.4 Anankastia
Additional specifier	6D11.5 Borderline Pattern

Etiology of PDs

PDs mostly emerge in adolescence and early adulthood [17]. There is very limited strong, evidence-based study on the factors that can contribute to its complex and multifactorial etiology, which several of these include biological, epigenetic, and medical factors [18]. The major biological factors that contribute to PDs are temperament and genetic background. Temperament is often considered to be an innate and heritable psychological trait, but it can be shaped and modified by environmental factors [19]. An abnormal or maladaptive temperament—such as extreme levels of some traits like harm avoidance, novelty seeking, reward dependence, and persistence—can contribute to the development of PDs [18]. Further research is needed to determine which genetic variations increase the risk of PDs. Nonetheless, evidence from numerous research studies including candidate gene association studies, linkage analysis, genome-wide association studies, polygenic studies, and twin analyses, reveals that specific genes related to neurotransmitter systems—such as serotonin, dopamine, and norepinephrine—are thought to significantly impact mood, suicidal tendencies, aggression, impulsivity, lack of empathy, and other PDs manifestations [20], [21], [22]. However, people with similar genetic backgrounds can also have very different outcomes due to the influence of epigenetic factors [23]. Studies stated that abnormal methylation combined with environmental factors, of which childhood trauma showed a high impact, significantly disrupts the development of personality traits, thus leading to PDs [24]. While no medical conditions can directly cause PDs, certain conditions involving neurological damage—such as Huntington's disease, neurosyphilis, multi-

ple sclerosis, tumors, epilepsy, head trauma, endocrine disorders, and AIDS—are often associated with the development or worsening of personality traits that correspond with PDs [25].

Prevalence of PDs

The World Health Organization (WHO) has reported that approximately 6.1% of individuals worldwide are affected by a personality disorder (PD) [4]. The prevalence rates for the three main clusters are 3.6% for Cluster A, 1.5% for Cluster B, and 2.7% for Cluster C [5]. In clinical settings, up to 20% of patients may present with PDs [26]. Among these, the most commonly observed disorders are BPD (28.5%), AvPD (24.6%), DPD (15%), and OCPD (10.5%) [27]. A meta-analysis from 2018 revealed that the overall prevalence of PDs is relatively high, with 12.16% of the general adult population in western countries affected. Cluster A disorders have the highest prevalence (7.23%), while OCPD is the most frequent individual disorder (4.32%), and DPD is the least common (0.78%) [28].

Currently, there is limited literature on the prevalence of PDs among medical students. One study highlighted that the rate of PDs in medical students is significantly higher than in the general population (30.2%) [3], which is considerably higher than in Western countries (12.16%), Asia (4.1%), and the global average as reported by the WHO (6.1%) [4]. Among medical students, OCPD was the most prevalent at 21.8%, much higher than the 2.1–7.9% seen in the general population. AvPD and PPD followed at 6.7% and 2.8%, respectively, while AvPD in the general population is around 2.6%. Narcissistic traits were also notably common, with a prevalence of 3.2%. SPD, NPD, and BPD

were all found to affect approximately 2% of medical students. DPD had the lowest prevalence among Cluster C disorders at 0.8%, which mirrors the rates seen in the general population [3].

Diagnostic Tools for Identifying PDs

In order to establish a personality disorder diagnosis, a comprehensive and thorough evaluation must be carried out by qualified healthcare professionals following standardized procedures and diagnostic guides. When clinicians suspect a personality disorder, they assess cognitive, emotional, interpersonal, and behavioral patterns over a period of time. Due to the limited self-awareness often exhibited by individuals with PDs, it may be necessary for practitioners to gather heteroanamnesis from other healthcare

professionals who have previously engaged with these patients, as well as from family members, friends, or other individuals in contact with them [17].

To formally diagnose a personality disorder, clinicians must adhere to the criteria outlined in the DSM-5-TR and conduct a comprehensive evaluation, which includes a mental status examination, clinical history, and relevant records [29]. The DSM-5 also includes an Alternative Model for Personality Disorders (AMPD) with two main parts: (1) Criterion A, which evaluates Level of Personality Functioning (LPF) and includes problems with self-concept and social functioning; and (2) Criterion B, which describes a five-domain model of maladaptive traits to find problems in one's personality [30].

Table 3. DSM-5 criteria for personality disorders

DSM-5 Criteria for Personality Disorders
To diagnose a personality disorder, the following broad criteria must be fulfilled, in addition to the specific requirements for the particular disorder:
(A) A long-standing pattern of thoughts, feelings, and behaviors that significantly differ from the cultural expectations of the individual. This pattern is evident in at least two of the following areas: cognition (how one views and interprets themselves, others, and situations), emotional expression (the range, intensity, stability, and appropriateness of emotional reactions), interpersonal interactions, and impulse control.
(B) The pattern is rigid and pervasive across various personal and social contexts.
(C) The pattern results in considerable distress or dysfunction in social, work, or other key areas of life.
(D) The pattern is consistent over time and can be traced back to adolescence or early adulthood.
(E) The pattern cannot be better explained by another mental health disorder.
(F.) The pattern is not the result of substance use (such as drugs or medication) or another medical condition (like brain injury).

In contrast, when using the ICD-11, clinicians are initially required to determine if individuals meet the general criteria for personality disorders, and then evaluate the severity of the disorder (mild, moderate, or severe) based on the impact on self-functioning and interpersonal relationships [31]. However, no equivalent instruments were

created with the ICD-11 PD model. To address this shortcoming, several instruments from the ICD-11 framework have been developed, including the Standardised Assessment of Severity of Personality Disorder (SASPD), which assesses impairment across nine domains of personality and social functioning, and the ICD-11 Personality Disor-

der Severity Scale (PDS-ICD-11), comprising 14 items that evaluate self-functioning, interpersonal relationships, and the effects of dysfunction on social and occupational life [32]. In addition to the DSM-5 and ICD-11, the McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD) is the self-report measure that has been widely studied specifically for BPD [33].

Challenges in Addressing PDs

The failure to identify personality disorders (PDs) can result in significant adverse outcomes, including an elevated risk of suicide, impaired social functioning, increased health-related suffering, and reduced productivity [32]. PD diagnoses are often accompanied by a distinct stigma, even within clinical settings [34], which negatively impacts the quality of healthcare delivery. Evidence suggests that medical students, despite experiencing psychological distress, are reluctant to disclose their difficulties due to the stigma associated with mental illness and the fear of professional repercussions arising from a mental health diagnosis [35]. Furthermore, factors inherent in medical education, such as excessive workload, lack of support, and a highly competitive environment, contribute to burnout, diminished empathy, and career dissatisfaction. While individual factors likely influence students' mental health, the interaction between these factors and their collective impact on different mental health disorders remains poorly understood [36].

Research indicates that PDs are subject to greater stigma than other psychiatric conditions, with public perceptions often characterized by fear and dissatisfaction [36]. Symptoms of PDs are frequently viewed as manipulative or resistant to intervention, driven by the assumption that individuals with these disorders should be capable of controlling their behavior. This perception positions individuals with PDs as disruptive rather than suffering from an illness [37]. Compared to individuals with other psychiatric disorders, those with PDs typically

elicit less empathy from the public and are less likely to be recognized as requiring professional intervention. Institutional support structures are often inadequate or difficult to access, further discouraging help-seeking behaviors among students [38]. The absence of well-defined mental health programs, peer support networks, and culturally appropriate interventions leaves many students feeling unsupported. Moreover, medical curricula rarely incorporate training on managing mental health challenges, either for students themselves or in their future professional roles [39].

Treatment and Management for PDs

PDs are generally not considered curable, as there is no definitive treatment that completely eradicates the condition. The focus of PDs' treatment is mainly to reduce interpersonal conflict and stabilizing psychosocial functioning [18]. Unfortunately, there is currently no standard method for treating the majority of PDs. This can be attributed to several factors, including the limited evidence available for treating personality disorders (PDs), largely due to the emphasis on borderline personality disorder (BPD), small sample sizes and short follow-up periods in clinical trials, the use of diverse outcome measures, and inadequate control of comorbid psychopathology. Additionally, the symptoms of PDs are complex and can vary significantly from one individual to another, further complicating diagnosis and treatment [12]. However, it is still possible to draw some broad generalizations. Patients should be taught to take charge over themselves in a disciplined (typically manual-guided) cooperation in psychological therapy [40]. Therapists should prioritize managing life circumstances, being proactive, responsive, validating, and ensuring proper supervision. The use of drug therapy should only be employed when in conjunction with psychosocial therapies; it should be time restricted to control certain symptoms; it should be stopped when the symptoms are

resolved [41]. Research indicates that those who participate in therapy often experience behavioral improvements, enhanced interpersonal connections, and increased emotional well-being [42].

PDs Manifestation in Medical Students

The burden of having a PDs as a medical student is profound. Even throughout preclinical courses, medical students are subjected to a variety of stressors. Long study hours, extensive amounts of study materials, and very intense exam schedules often do not give students time to process their emotions [43]. The rates of depression (39.4% vs. 33.6%) and anxiety (47.1% vs. 39%) of medical students are significantly higher than those of non-medical students [44]. It is common for medical students to be held to unrealistically high standards when it comes to staying in peak physical and mental health and effectively managing patient-related challenges. This often results in the neglect of their own mental health and well-being [45]. Research has established that there is a significant deficiency in mental health resources and support within medical education, underscoring the need for systemic improvements to address this critical issue [46].

The intense academic and clinical demands of medical training can exacerbate pre-existing PDs or lead to the development of maladaptive personality traits [47]. This disorder frequently manifests as emotional disturbances that negatively affects academic performance and interpersonal relationships. Emotional instability arising from maladaptive personality traits can lead to academic difficulties, including burnout, depression, and, in severe cases, dropouts or premature career termination [48]. One research study found that PDs may be more burdensome than schizophrenia, HIV/AIDS, and type 2 diabetes mellitus, which is an indication of how serious the problem is [49].

The manifestation of PDs among medical students is highly diverse and complex, as some symptoms cannot be generally appli-

cable to all individuals diagnosed with PDs, given the complexity and heterogeneity of PDs' symptoms, along with the possibility of symptom overlap among various types [50]. For example, people with paranoid personality disorder (PPD) typically exhibit excessive mistrust and suspicion, which can create challenges in communication with others and hinder effective teamwork [51]. Students diagnosed with schizoid personality disorder (SPD), marked by significant social withdrawal, may face difficulties in establishing appropriate patient engagement [52]. Similarly, schizotypal personality disorder (STPD), marked by social and interpersonal deficits, can hinder their ability to establish trust and empathy with patients [53]. Students exhibiting traits of borderline personality disorder (BPD) often experience intense and sudden emotional dysregulation and impulsivity, which can disrupt professional boundaries with patients, affecting both the quality of patient care and the student's capacity for empathy [54]. Students with BPD might find it difficult to excel in an academic setting [55]. Individuals with narcissistic personality disorder (NPD) are often motivated by an inflated sense of self-worth, a desire for constant admiration, and a diminished capacity for empathy. This self-centered orientation makes them often overestimate their abilities and underestimate the importance of empathetic patient care that is essential in the medical profession [56]. Additionally, students with avoidant personality disorder (AvPD) often manifest in pervasive social inhibition and an aversion to interpersonal engagement, which can severely hinder their capacity to develop supportive professional networks and confidently interact with patients [57]. Students diagnosed with obsessive-compulsive personality disorder (OCPD) may exhibit adaptive perfectionistic tendencies that can initially bolster academic performance; however, maladaptive perfectionism may precipitate procrastination, indecisiveness, and eventual burnout. Research suggests

that even if a student with OCPD has finished their studies, they may still avoid sleep before examinations, leading to excessive anxiety [58].

The research covering the correlation between PDs and academic performance in medical students is notably limited. Nevertheless, the increase in certain personality traits has been shown to correlate with scholastic challenges among students in general. Students' academic performance has been negatively correlated with the presence of dysfunctional personality traits, including borderline, schizoid, or antisocial traits. Academic performance may also be significantly impacted by higher scores on the Psychopathic Deviate, Schizophrenia, Hypomania, and Social Introversion scales, according to another research [18].

CONCLUSION

Medical students with personality disorders (PDs) face profound challenges, especially with all the extensive stress of intense academic and clinical training they faced. The manifestations of PDs in medical students may substantially influence their lives, including impaired academic performance, emotional instability, and difficulties in building healthy professional relationships with patients and colleagues. These issues can have a lasting effect on their mental health and ability to advance in their careers. Research consistently indicates that the prevalence of personality disorders (PDs) among medical students exceeds that of the general population, underscoring the critical need for focused mental health support and structural reforms within medical education. Although there is currently no known cure for PDs, therapy that focuses on alleviating symptoms, improving relationships, and fostering general psychological and social stability can be employed in those with PDs. Participation in therapy is associated with increases in behavioral control, emotional regulation, and interpersonal functioning; these skills are essential for thriving in medical school and building resilience in

the workplace. Furthermore, addressing the stigma surrounding PDs is of paramount importance, as negative perceptions contribute to reluctance in seeking help and hinder the development of comprehensive support systems. To improve the academic and professional results for medical students impacted by PDs, it is necessary to enhance mental health services, include mental health training in the medical curriculum, and establish peer support networks.

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CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

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