Research Article

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Psychiatric and Medical Profile of Students at the University of Yaoundé I

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ABSTRACT

Background: The mental health of medical students is an increasing global concern due to its impact on their quality of life and future medical practice. It is therefore essential to assess the mental health status of medical students to anticipate potential psychopathological consequences, both individually and in terms of the quality of care these future physicians will provide.

Objective: The goal of this study is to assess the mental health profile of medical students at the University of Yaoundé I.

Methodology: This was a cross-sectional analytical study conducted among students of the Faculty of Medicine and Biomedical Sciences (FMSB) of the University of Yaoundé I over a two-month period (February to March 2021). Data were collected based on the students' academic level and medical track using a standardized tool, the 28-item General Health Questionnaire (GHQ-28). The binary scoring system was used to identify probable cases of psychological distress (score > 5). Statistical analyses were performed using SPSS version 24.0.

Results: A total of 501 students were included, with a sex ratio of 0.77. The most represented age group was 20–25 years (67.3%). The sample included 60.5% of students in general medicine, 27.3% in dentistry, and 12.2% in pharmacy. The prevalence of psychological distress was 86.4%. Anxiety, somatic complaints, and sleep disorders were the most frequent symptoms. Female gender (p = 0.014; OR = 1.57 [1.09–2.26]), master's level (p = 0.027; OR = 2.24 [1.07–4.66]), and being in the general medicine track (p = 0.019; OR = 3.61 [1.22– 10.68]) were significantly associated with a higher risk of psychological distress or suicidal ideation. Fewer than 5% of affected students had received professional support.

Conclusion: Psychological distress among medical students at Yaoundé I is alarming. These findings highlight the urgent need to strengthen psychosocial support systems in Cameroonian medical schools, taking into account gender, academic level, and track-specific factors.

Keywords: Mental Health; Psychological Distress; GHQ; Medical Students; Cameroon

Introduction

Mental health among medical students is generating increasing global interest [1-4]. According to the World Health Organization (WHO), mental well-being, alongside physical and social well-being, is a fundamental condition for individuals to realize their potential and cope with the challenges of daily life [5]. Among future physicians, mental disorders can compromise not only their quality of life but also the quality of care they will provide to their patients. It can affect their academic performance, social and family relationships, and their ability to adapt to the demands of medical training [6]. In the demanding context of medical studies, characterized by a succession of examinations, increasing clinical workload, and growing responsibilities towards patients, there are numerous sources of stress. This constant pressure exposes students to heightened risks of psychological distress, anxiety, burnout, and even dropping out of medical school. According to the transactional model of stress by Lazarus and Folkman [7], stress results from a dynamic interaction between the individual and their environment, mediated by the cognitive appraisal of situations and the resources available to cope with them. This model thus provides a relevant framework for objectively mapping the prevalence and determinants of psychological distress among students. The present study therefore aims to estimate the extent of psychological distress among medical students at the University of Yaoundé I and to identify the associated factors.

Methodology

We conducted a descriptive cross-sectional study after obtaining ethical approval from the institutional ethics committee and administrative authorization from the Faculty of Medicine and Biomedical Sciences (FMSB) of the University of Yaoundé I. Data collection took place over a two-month period (February to March 2021) within the FMSB and in Yaoundé hospitals where students were completing their academic internships. All students enrolled at the FMSB during the 2020–2021 academic year, across all levels and disciplines, were considered eligible. Using student lists provided by class representatives, we performed random sampling stratified by discipline and academic level to ensure balanced representation of subgroups. Students meeting the inclusion criteria were contacted and informed about the study objectives, absence of funding, potential benefits, and their right to decline participation without any consequences. Special attention was paid to providing comprehensive information and obtaining written informed consent in order to minimize nonresponse bias and encourage diverse voluntary participation. Depending on their availability, participants completed a self-administered questionnaire including sociodemographic and academic variables, as well as the French version of the General Health Questionnaire – 28 items (GHQ-28). The GHQ-28 was selected for its ease of use (less than 10 minutes) and its ability to detect transient psychological distress or individuals at risk of developing psychiatric disorders in specific contexts (e.g., exams, clinical placements), as opposed to tools like the Beck Depression Inventory (BDI) which focus more on chronic depressive symptoms. The GHQ-28 explores four complementary dimensions: somatic symptoms, anxiety/insomnia, social dysfunction, and depression [8]. Unlike more targeted instruments such as the Hospital Anxiety and Depression Scale (HADS), it offers a global approach without the need for additional questionnaires. The GHQ-28 also benefits from international validation, facilitating comparison with findings from other studies [9,10]. We used the standard binary scoring method, assigning scores of 0, 0, 1, and 1 to the four response options, for a total score ranging from 0 to 28. A score strictly greater than 5 was considered indicative of a high probability of psychological distress [11]. All data were collected in strict compliance with anonymity and confidentiality. Incomplete questionnaires, particularly those with missing GHQ-28 responses, were excluded from the analysis. Statistical processing was performed using SPSS software (version 24.0). For quantitative variables, we calculated the median and interquartile range. For qualitative variables, frequencies and proportions were determined. Finally, Pearson's chi-square test was used to identify potential associations between categorical variables, with a significance level set at $p < 0.05$.

Results

Socio-Academic Profile

Out of the 600 students contacted, 501 met the inclusion criteria, representing a participation rate of 89.3%. The sex ratio was 0.77, in favor of females. The median age of participants was 23 years (interquartile range: 3 years), with ages ranging from 17 to 35 years. Two-thirds (67.3%) were between 20 and 25 years old. The socio-academic characteristics are summarized in Table 1. The majority (77.6%) were enrolled in a Master's or Doctoral program. Regarding the perception of their academic performance, 47.1% of students considered it to be good, while 40.3% rated it as average. A family history of psychiatric disorders was reported by 17.8% of respondents. Finally, only 7.4% considered their mental health to be good.

Table 1: Socio-academic characteristics.

Categories	Variables	N=501 n (%)
Sex	Female	283 (56,5)
	Male	218 (43,5)
Field of study	General Medicine	303 (60,5)
	Dental Medicine	137 (27,3)
	Pharmacy	61 (12,2)
Level of study	Bachelor's degree	112 (22,4)
	Master's degree	290 (57,8)
	Doctorate	99 (19,8)

Overall Prevalence of Psychological Distress

The average GHQ-28 score was 12.05 (standard deviation = 1.87). Among all participants, 86.4% had a score above the pathological threshold (>5), indicating a high probability of psychological distress. Regarding suicidal thoughts, 14.4% of students reported having experienced them during their studies at the FMSB. Before entering university, 12.2% had already had such thoughts, and 2.2% reported a past suicide attempt. Figure 1 illustrates the distribution of the types of psychological distress expressed by the participants. Up to 40.5% of students reported more frequent sleep disturbances since entering FMSB. Among those who reported psychological distress, only 5% had received professional support. This support was more common among men (7.3% vs. 3.5% among women).

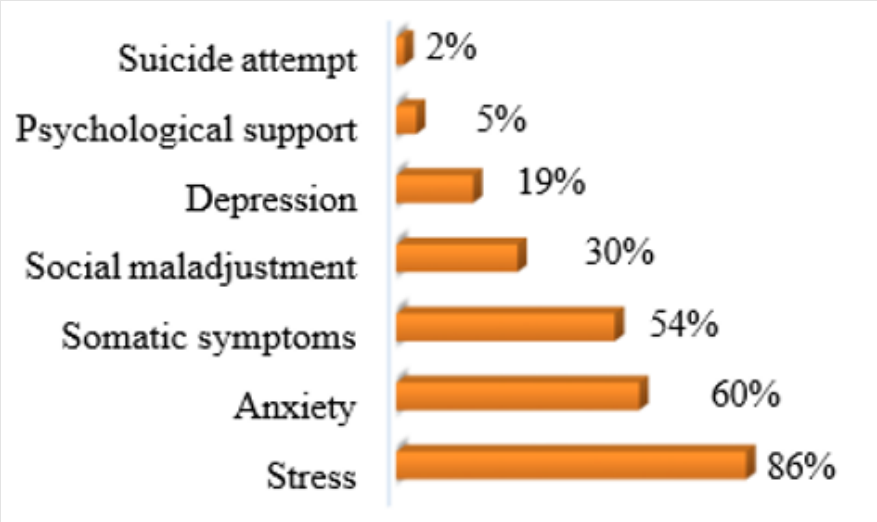

Figure 1: Self-reported mental health score

Various Analysis

Table 2 presents the distribution of stress, suicide attempts, and GHQ-28 scores according to its four dimensions: somatic symptoms, anxiety/insomnia, social dysfunction, and depressive symptoms. Statistical analyses revealed several significant associations:

1. Female students had an increased risk of anxiety (p = 0.014; OR = 1.57 [1.09–2.26]) and somatic symptoms (p = 0.001; OR = 1.87 [1.30–2.67]).

2. Male students were significantly more likely to receive psychological support (p = 0.034; OR = 2.41 [1.04–5.56]).

3. Students in general medicine had a threefold higher risk of reporting suicidal ideation compared to those in other fields (p = 0.019; OR = 3.61 [1.22–10.68]).

4. Master's level students were also at higher risk of suicidal thoughts than bachelor's level students (p = 0.027; OR = 2.24 [1.07–4.66]), although bachelor's students more frequently received psychological support (7% vs. 3.3% in master's).

Table 2: Psychological distress according to socio-academic data.

Categories	Stress N=431	Anxiety N=302	Somatic symptoms N=270 n (%)	Social maldjustment N=150	Depression N=95	Suicide attempt N=10
Sex						
Female	248 (57,5)	184 (60,9)	172 (63,7)	87 (58)	60 (63,1)	7 (70)
Male	183 (42,5)	118 (39,1)	98 (36,3)	63 (42)	35 (36,9)	3 (30)
Field of study						
General Medicine	262 (60,7)	185 (61,3)	140 (51,9)	92 (61,3)	66 (69,5))	7 (70)
Dental Medicine	115 (26,6)	83 (27,5)	70 (26)	44 (29,3)	19 (20)	3 (30)
Pharmacy	54 (12,7)	34 (11,2)	60 (22,1)	14 (9,4)	10 (10,5)	0 (0)
Level of study						
Bachelor's degree	92 (21,5)	63 (20,8)	65 (24,1)	35 (23,3)	20 (21)	1 (10)
Master's degree	268 (62,1)	183 (60,6)	156 (57,7)	88 (58,6)	56 (58,9)	6 (60)
Doctorate	71 (16,4)	56 (18,5)	49 (18,2)	27 (18,1)	19 (20)	3 (30)

Discussion

The aim of this study was to assess the mental health profile of students at the Faculty of Medicine and Biomedical Sciences.

Study Participation and Sociocultural Context

The acceptance rate reflects a good level of participation, demonstrating a clear interest in the issue addressed. However, the refusal of some students may indicate a reluctance to discuss mental health, which remains stigmatized in many African societies dominated by traditional mindsets and prejudices [12,13]. This sociocultural context can influence not only study participation but also the expression of symptoms and the use of healthcare services. Therefore, it would be relevant to integrate mental health education into training curricula from the early years, through awareness modules, to help normalize conversations around psychological well- being.

Psychological Distress

The majority of students showed a pathological score on the GHQ-28, indicating marked psychological distress. This reveals a mismatch between academic demands and the personal or institutional coping resources available. According to Lazarus's model [7], this ongoing tension would promote chronic transactional stress. The level of psychological distress was significantly higher than that reported in a global meta-analysis [2], which estimated the prevalence of anxiety among medical students at 33.8%. Similarly, a study conducted in Ethiopia found a prevalence of 45.95% [14] of mental distress among medical students. These differences could be attributed to cultural, socioeconomic, and institutional factors specific to each region. Anxiety, the most common form of distress, is often one of the first indicators of an imbalance in the stress-demand relationship [15]. It reflects persistent emotional overload and low effectiveness of coping strategies. Training students in active coping strategies, such as planning, problem-solving, or mindfulness, through monthly workshops supervised by professionals, could increase their perceived self-efficacy and help prevent escalation to more severe disorders. This high level can also be explained by the abrupt transition to autonomy, increasing academic demands, reduced time for rest and leisure, as well as challenges in adapting to the university environment. These results are consistent with studies conducted in Egypt and Morocco, which reported anxiety rates of 64.3% and 54% respectively among medical students [16,17]. The prevalence of depression observed in our study is lower than that reported by a previous Cameroonian study conducted in 2017 (30.6%) [18]. This difference may be attributed to the choice of measurement instruments. The GHQ-28 does not allow for a formal clinical diagnosis but provides a global assessment of psychological well-being, which may explain discrepancies compared to tools specifically designed to detect clinical depression.

Academic Factors and Resilience

Psychological distress is particularly pronounced among Master's students and those in the general medicine track, suggesting increased vulnerability at certain stages of medical training. According to Lazarus, stress perception is shaped by past experiences and available coping resources; thus, advanced students may have a heightened awareness of academic stakes or be exposed to specific stressors. Implementing an academic and emotional mentoring program, in which doctoral-level students support those in the Master's cycle, could not only help the most vulnerable students but also highlight the resilience developed at the end of the training path.

Despite concerning indicators of mental health, most students rated their academic performance as good or average. This reflects an ability to mobilize coping or adaptation strategies that allow them to maintain an acceptable level of academic output. Mental health programs should incorporate a strengths-based approach focused on

enhancing existing coping capacities (resilience, solidarity, work routines) to help students reinforce what is already working in their daily lives. Doctoral-level students, having completed intensive hospital internships, appear to benefit from a more stable pace, which fosters better emotional regulation and a healthier work- life balance. These observations are consistent with findings from a study conducted in Parakou, which identified hospital internships as aggravating factors of psychological distress [19]. However, this resilience should not obscure the urgency of an appropriate institutional response.

Gender Influence on Psychological Distress

The study reveals increased vulnerability among female students, who were more frequently affected by anxiety and somatic symptoms. This trend is supported by a study conducted in China [20], which found that female students were more likely to experience psychological distress. This predominance may be linked to more frequent exposure to daily stressors, as well as biological factors such as hormonal fluctuations [21,22]. In contrast, male students were more likely to have received psychological support, possibly reflecting a tendency to externalize their distress or to seek help more proactively. Conversely, women appeared to internalize their symptoms more often, which may delay access to care. These results argue for the development of gender-specific prevention programs and interventions, tailored to the unique needs of each gender. The paradox between the high prevalence of psychological distress and the low rate of specialized support can be explained by several factors: the persistent stigma surrounding mental health, lack of awareness about available services, normalization of academic stress, and poor accessibility. It is also likely that a sense of self-reliance or the normalization of academic suffering prevents students from taking the step toward professional help.

Limitations and Perspectives

Although this study provides valuable insights into the mental health of FMSB students, it presents certain methodological and conceptual limitations. Firstly, some potentially influential factors, such as depression linked to romantic relationships, were not specifically considered, although they may play a major role in the mental health of young adults. Moreover, while the GHQ-28 is effective for detecting transient psychological disorders, it is not designed to identify chronic or long-term psychiatric conditions. This may limit the scope of the findings and lead to an underestimation of deeper mental health issues. Additionally, the strictly quantitative approach adopted in this study, though useful for outlining a general profile, does not capture the complexity of individual experiences or the subjective dynamics of students' coping processes in the face of stress. In this regard, a second phase of research is envisioned, based on a qualitative approach. It will aim to explore in greater depth the coping strategies students employ in response to psychosocial pressures, as well as the personal, social, and institutional resources that support their psychological well-being. Such an approach will complement the current quantitative data and enrich the understanding of vulnerability and resilience mechanisms specific to this student population.

Conclusion

This study highlights a concerning prevalence of psychological disorders among medical students at the University of Yaoundé I, exceeding rates reported in other parts of the world. Contributing factors include high academic demands, insufficient institutional support, and gender differences in the perception and management of stress. In a sociocultural context where mental health remains stigmatized, it is essential to strengthen listening mechanisms, awareness initiatives, and psychological support services within higher education institutions. The establishment of a comprehensive health and preventive medicine service at the University of Yaoundé I, including an annual mandatory consultation, would represent a key lever for the early detection of psychological disorders, which are often overlooked or unspoken. While this study provides an initial assessment of students' mental health profiles, it also paves the way for a deeper exploration of the coping strategies and resources mobilized in response to distress. These findings should be regarded as a wake-up call, urging further investigations, particularly qualitative ones, to shed light on students's lived experiences and to reinforce institutional responses.

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