

# Prevalence and Sociodemographic Characteristics of Students Hospitalized in Psychiatry at CHNU Fann (2019-2024)

Sokhna Seck\*, Chafaatou Mahamane, Momar Camara, Fatoumata Ba, Idrissa Ba, El Hadji Makhtar Ba, Oumar Mamadou Samba, Maimouna Dièye, Papa Lamine Faye, Aida Sylla

Service de Psychiatrie, Centre Hospitalier National Universitaire de Fann, Dakar, Senegal  
Email: \*sooxnasec@yahoo.fr

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## Abstract

**Objective:** To describe the prevalence and sociodemographic profiles of students hospitalised at the Moussa Diop Psychiatric Clinic of CHNU Fann in Dakar between 2019 and 2024. **Methods:** This retrospective descriptive study included all students hospitalised over 6 years (2019-2024). Data were extracted from the patients' medical records. **Results:** Of the 3330 hospitalised patients, 346 were students, representing a hospital prevalence of 10.39%. A detailed analysis was conducted on 93 usable records. The mean age was  $24.41 \pm 3.7$  years (range, 19-37 years). A male predominance was observed (63.44%; sex ratio = 1.74). The most represented fields were health sciences (15.05%) and mathematical sciences and computer science (15.05%). The majority were Senegalese (69.89%) and lived in the Dakar region (91.40%). The students were predominantly single (93.55%) and childless (95.70%). More than half of the participants were enrolled in the undergraduate cycle (65.96%). **Conclusion:** Hospitalised students were predominantly young males enrolled in the first cycle of university and living mainly in Dakar. These results highlight the need to expand mental health services in university settings in Senegal.

## Keywords

Students, Psychiatry, Hospitalization, Sociodemographic Characteristics, Dakar, Senegal

## 1. Introduction

Student mental health has become a major public health issue in many countries worldwide. It has been found that 75% of diagnosed psychiatric disorders occur

before the age of 24 [1]. Students show a higher prevalence of psychological disorders than non-student young people of the same age [2] and are twice as likely to report psychological distress as the general population [3] [4].

Indeed, the university period corresponds to a transitional phase marked by significant emotional, social, and academic changes, which can make students particularly vulnerable to psychiatric disorders. In the Senegalese context, this issue is even more concerning, given that mental health services in university settings remain limited and stigmatization can be a barrier to early consultation.

Given these challenges, it is necessary to better understand the characteristics of students hospitalized in psychiatry to guide appropriate prevention strategies. This study aimed to describe the prevalence and sociodemographic profile of students hospitalized at the Moussa Diop Clinic of CHNU Fann over a six-year period (2019-2024).

## 2. Methodology

This retrospective descriptive study was conducted at the Moussa Diop Psychiatric Clinic of the CHNU Fann. It included all students who were hospitalized between 1 January 2019 and 31 December 2024. All student records registered during this period were identified from the hospitalization records. Of the 346 identified students, only 93 complete records were retained for the analysis. The remaining 253 records were excluded due to missing key sociodemographic information, including incomplete documentation of age, field of study, nationality.

The extracted sociodemographic data included age, sex, nationality, university field of study, level of study, area of residence, marital status, number of children, and living arrangements during the study. Information was organized as absolute and relative frequencies for qualitative variables and as means, standard deviations, and ranges for quantitative variables.

Data were collected using a survey form on the KoboCollect application and analyzed using R software version 4.4.1.

## 3. Results

### 3.1. Prevalence

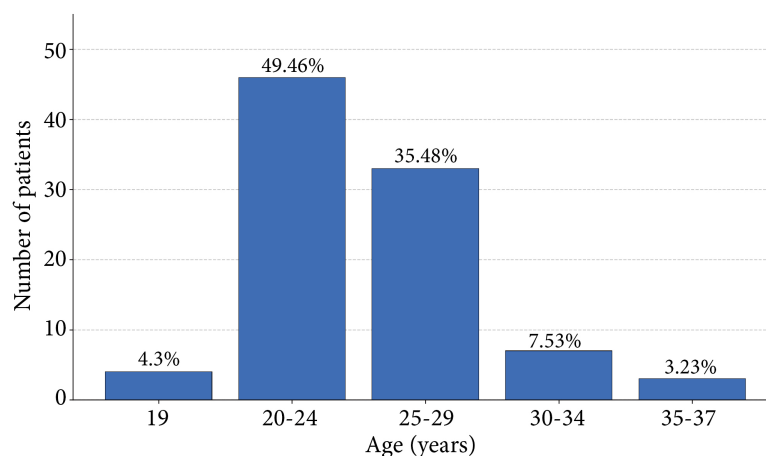
During the study period, 3330 patients were hospitalized in the psychiatry department of CHNU Fann Hospital. Among them, 346 were students, corresponding to a hospital prevalence of 10.39%. However, owing to the incompleteness of some records, data from only 93 students were analyzed.

### 3.2. Sociodemographic Characteristics

#### Age (see Figure 1)

The mean age of the hospitalized students was 24.41 years, with a median age of 24 years. The ages of the patients ranged from 19 to 37 years. The most represented age group was 20 - 24 years, accounting for 49.46% of the patients. This was followed by the 25 - 29 age group, which represented 35.48% of the sample.

Thus, 84.94% of hospitalized students were aged 20 - 29 years.



**Figure 1.** Distribution by age (N = 93).

### Sex

The study population was predominantly male, representing 63.44% of the cases, compared to 36.56% of the female population. The calculated sex ratio was 1.74, reflecting a clear male predominance among hospitalized students during the study period.

### University Field (see Table 1)

**Table 1.** Distribution of patients by field of study.

Field	n	%
Health Sciences	14	15.05
Mathematical Sciences and Computer Science	14	15.05
Economics, Accounting and Finance	12	12.90
Law and Political Science	11	11.83
Management and Logistics	10	10.75
Arts, Languages, Humanities and Social Sciences	9	9.68
Commerce, Marketing and Communication	6	6.45
Life and Earth Sciences	6	6.45
Engineering Sciences and Technology	6	6.45
Preparatory Class	3	3.23
Renewable Energy	1	1.08
Sports	1	1.08
Total	93	100

Hospitalized students came from various university departments. Health sciences and mathematical/computer sciences were the two most represented fields,

each accounting for 15.05% of students (14 cases each). Economics, accounting, and finance represented 12.90% of hospitalizations, followed by law, political science (11.83%), and management-logistics (10.75%). Other fields were present in smaller proportions but reflected the diversity of the academic pathways involved.

#### **Nationality**

The majority of hospitalized students were Senegalese, representing 69.89% of the analysed records. The remaining population consisted of foreign students from 14 different countries, mainly Gabon (6 cases) and Benin (5 cases). This diversity reflects the growing presence of foreign students in Dakar's higher education institutions.

#### **Area of Residence**

Nearly all hospitalized students resided in Dakar (91.40%). All students, regardless of nationality, lived in Senegal during their study periods.

#### **Marital Status**

Most hospitalized students were single, representing 93.55% of the analyzed cases. A very small proportion of students were married (5.38%) or divorced (1.08%).

#### **Number of Children**

The vast majority of hospitalized students (95.70%) had no children. Only four patients had one or two children each.

#### **Level of Study (See Table 2)**

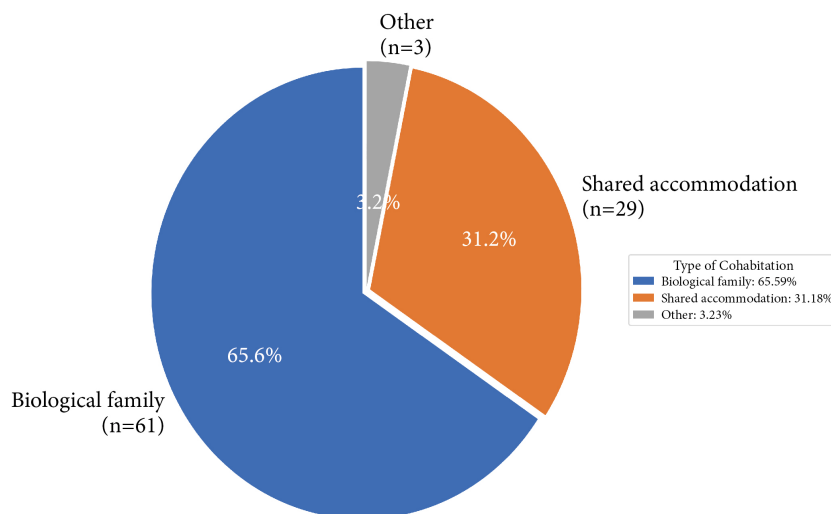
The distribution by level of study shows that 36.56% of the students were enrolled in Year 1 of the undergraduate cycle (L1). Overall, students in the first university cycle (L1-L3) represented 65.96% of the hospitalizations. Master's level 1 and 2 accounted for 20.43% of cases, while the doctoral cycle represented only a minority (7.53%). These data indicate that hospitalizations mainly concerned students at the beginning of their academic journeys.

**Table 2.** Distribution of patients by level of study.

Level of Study	n	%
L1	34	36.56
L2	14	15.05
L3	18	19.35
M1	9	9.68
M2	10	10.75
D1	2	2.15
D2	5	5.38
Post-doctoral (Urology)	1	1.08
Total	93	100

#### **Type of Cohabitation (See Figure 2)**

During their studies, 65.59% of hospitalized students resided with their families of origin, while 31.18% lived in shared accommodation. This predominance of family cohabitation reflects a common living arrangement for students in Senegal (Figure 2).



**Figure 2.** Distribution of patients by type of cohabitation (N = 93).

## 4. Discussion

### Prevalence

The prevalence of students hospitalized for psychiatric disorders at CHNU Fann during the study period was 10.39%. Compared to other studies conducted in Senegal, our result is close to that found by Seck [5] in Louga (9.05%) but remains higher than that reported by Fall *et al.* [6] in Dakar (6.7%). However, this prevalence remains higher than international estimates, indicating that approximately 3% to 5% of students in psychological distress are hospitalized, with the majority receiving outpatient care [7]. This high rate could be explained by the severity of the clinical presentations observed and the delay in seeking care, often prolonged due to significant barriers to care. When students delay seeking help, their conditions often deteriorate to the point where outpatient management becomes insufficient, necessitating hospitalization for acute psychiatric crises. This delay is frequently related to stigmatization and lack of access to university mental health services.

### Sociodemographic Aspects

Most hospitalized students belonged to the 20 - 24 age group, confirming that the university period represents a particularly vulnerable window. The mean age of 24.41 years was slightly higher than that reported in several international studies. For example, Silveira in Portugal [8] found a mean age of 23 years among students followed as outpatients, while Braider *et al.* [9] in the United States reported that more than half of hospitalized students were between 17 and 21 years

of age. Similarly, Yoon *et al.* [10] observed a mean age of 21.21 years among hospitalized and outpatient students. This difference could be attributed, in our context, to a delay in seeking help, often linked to stigmatization, lack of information, and the absence of university early detection structures.

Regarding sex, our study revealed a male predominance (63.44%), contrary to data from studies conducted in the United States and Portugal, where women were more frequently hospitalized or followed. Braider *et al.* [9], Morpeth-Provost [11], and Yoon *et al.* [10] reported that the majority of patients were female (56%-60%). This male predominance could also be explained by the demographic composition of the Senegalese universities. According to data from the National Agency for Statistics and Demographics (ANSD), higher education cycles show a slightly higher proportion of men than women, with 5% versus 3.6%, respectively [12].

The distribution of students by field of study reveals a significant presence of students enrolled in health sciences and mathematical/computer sciences, each representing 15.05% of hospitalizations. This overrepresentation of the biomedical and scientific fields is consistent with international data. Silveira *et al.* [8] observed that medical students were widely represented among psychiatry cases. In several African studies, health students also show high rates of depression, anxiety, or stress-related disorders, as in Benin (55.9% depression) [13] or Burkina Faso (50.7% mental disorders) [14]. These results suggest that academic pressure, workload, and performance demand specific to these fields are significant risk factors.

The study also highlights a significant proportion of foreign students (30.11%), the majority of whom are from Central and West Africa. Their care presents specificities, particularly related to isolation, distance from family, and financial constraints on care. In some cases, students were brought in by their roommates before families could be contacted, reflecting increased vulnerability to stress and disruption of usual social support. This finding is consistent with the literature, which shows that foreign students have a higher level of perceived stress than national students [15].

The majority of hospitalized students lived with their families of origin, a result comparable to that of Silveira in Portugal (62.7%) [8]. This family cohabitation can facilitate referral to care in case of decompensation, but it can also be influenced by intrafamilial tensions or relational difficulties, which are likely to worsen psychological distress. Conversely, American studies, such as that of Rosecan [16], indicate that students living far from their families are at a higher risk of being hospitalized due to a lack of a nearby support network.

Finally, the distribution by level of study shows a strong concentration of hospitalizations in the first year of undergraduate study (36.56%). This trend has been confirmed by several international studies. Braider [9], Morpeth-Provost [11], Mitchell *et al.* [17], and Silveira *et al.* [8] reported that most students were hospitalized or followed in psychiatry at the beginning of their studies, with proportions

reaching up to 89.4%. The first year of university is a pivotal period marked by major academic, social, and emotional adaptation challenges.

### Study Limitations

This study has several limitations that should be considered when interpreting the findings. First, as a single-center study conducted at CHNU Fann, the results may not be generalizable to all university students in Senegal or other settings in West Africa. Second, the exclusion of 253 records (73.1%) due to incomplete data raises the possibility of selection bias, as students with missing information may differ systematically from those included in the analysis. Third, the retrospective nature of the study limited our ability to collect certain potentially relevant variables and to verify the accuracy of recorded information. Despite these limitations, this study provides valuable insights into the sociodemographic characteristics of hospitalized students and highlights important areas for future research and intervention.

## 5. Conclusion

This study highlights the notable prevalence of psychiatric hospitalizations among students at CHNU Fann. The patients of concern were mainly young male adults enrolled at the beginning of their university studies and residing predominantly in Dakar. These results underscore the importance of strengthening prevention, early detection, and care in university settings, particularly among students exposed to high academic pressure or social isolation. Based on these findings, we recommend: (1) implementing targeted mental health screening programs for first-year students, particularly in high-pressure fields such as health sciences and mathematical/computer sciences; (2) establishing specialized support services for international students who face unique challenges related to isolation and distance from family; (3) developing peer support networks and early intervention programs within university settings; and (4) conducting awareness campaigns to reduce stigma and encourage early help-seeking behavior among students. These interventions could help reduce the severity of psychiatric conditions at presentation and potentially decrease the need for hospitalization.

## Conflicts of Interest

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

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