

Association between personality disorders and severity of alcohol dependence among patients followed in psychiatry at the Analankininina university hospital center of Toamasina, Madagascar

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Abstract

Introduction. Personality disorders are frequent comorbidities among patients with alcohol use disorder and may influence the clinical profile, illness trajectory, and therapeutic prospects [1,2]. Their frequency in the general population and in clinical settings varies according to diagnostic approaches and cultural contexts [3,4]. Among alcohol-dependent individuals, the literature reports a high co-occurrence with certain personality profiles, particularly antisocial and borderline personality disorders [5]. In low-resource countries, hospital-based data on this issue remain scarce. This study aimed to describe the sociodemographic and clinical profile of personality disorders among alcohol-dependent patients managed in psychiatry in Toamasina and to analyze correlates of alcohol dependence severity.

Methods. We conducted a monocentric, cross-sectional, descriptive, and analytical study in the Psychiatry Department of the Analankininina University Hospital Center (CHUAT), Toamasina, from January 1, 2024, to January 1, 2025. Patients aged 18 years or older, seen as outpatients or inpatients, with both a history of alcohol consumption and a diagnosis of personality disorder were included after consent, based on exhaustive recruitment of complete records. Personality disorders were identified according to ICD-10 [8], and alcohol use was assessed with the AUDIT [7], with severity graded according to DSM-5 criteria [6]. Bivariate analyses relied on the Chi-square test and, when necessary, Fisher's exact test; the significance threshold was set at $p < 0.05$.

Results. Among 1,797 patients managed during the study period, 30 met the inclusion criteria, corresponding to a prevalence of 1.67%. Men predominated (73.33%) with a sex ratio of 2.75. The mean age was 38 years, and the 40–49-year age group was the most represented (30.00%). The tertiary sector accounted for 56.67% of patients, and 43.33% were single. Antisocial personality disorder and emotionally unstable personality disorder, impulsive/borderline type, each represented 43.33% of cases. Alcohol dependence was moderate in 60.00% of cases and severe in 33.33%. Age was significantly associated with dependence severity ($p = 0.0027$), whereas no statistically significant association was found for sex, occupation, marital status, or type of personality disorder.

Conclusion. In this hospital context, personality disorders observed among alcohol-dependent patients mainly involved antisocial and borderline/impulsive profiles. The severity of alcohol dependence appeared to be primarily related to age. Systematic screening for personality disorders among alcohol-dependent patients could improve therapeutic orientation and continuity of care [19,20].

Keywords: Alcohol dependence; Personality disorders; Comorbidity; Psychiatry; Madagascar

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1. Introduction

Alcohol dependence is a major public health problem because of its somatic, psychiatric, and social consequences. From a neurobiological perspective, it is part of a complex process involving reinforcement, loss of control, and progressive impairment of behavioral self-regulation [1]. In this context, personality is not merely a clinical background factor but may modulate drinking patterns, vulnerability to complications, and response to treatment [2].

Personality disorders affect a substantial proportion of the general population, and their prevalence rises markedly in psychiatric clinical settings [3,4]. Among individuals with alcohol use disorder, the frequency of personality comorbidities is particularly high, which complicates management and often worsens functional prognosis [5].

The World Health Organization defines alcohol dependence as a cluster of behavioral, cognitive, and physiological phenomena that develop after repeated alcohol use [6]. Standardized assessment may rely on the AUDIT [7], whereas personality disorders are classified within a structured clinical framework in ICD-10 [8].

Certain personality patterns, particularly antisocial and borderline, have been especially reported among patients with harmful or dependent alcohol use [9,10]. Clinically, these profiles are often associated with impulsivity, interpersonal difficulties, and impaired emotional control, all of which may aggravate drinking behaviors [11].

In Madagascar, few hospital-based data document personality disorders among alcohol-dependent patients. Against this background, the present study aimed to describe the sociodemographic and clinical profile of personality disorders among alcohol-dependent patients followed at CHUAT in Toamasina and then to examine correlates of alcohol dependence severity in this population.

2. Methods

2.1. Study design and setting

This was a monocentric, cross-sectional, descriptive, and analytical study conducted in the Psychiatry Department of the Analankininina University Hospital Center (CHUAT) in Toamasina, Madagascar. This department is a regional referral structure for mental health, providing both outpatient consultations and inpatient care.

2.2. Study period

The observation period extended from January 1, 2024, to January 1, 2025.

2.3. Study population

The source population comprised all patients seen in outpatient consultation or hospitalized during the study period. Included were patients aged 18 years or older who had both a reported history of alcohol consumption and a diagnosis of personality disorder, provided they gave informed consent and had an exploitable medical record. Patients without a history of alcohol use, those with other psychiatric disorders without personality disorder, incomplete records, and non-consenting patients were not retained. Duplicate entries, patients lost to follow-up, and incomplete files were excluded from the final analysis.

2.4. Sampling method and data collection

Recruitment was exhaustive, based on hospitalization registers and outpatient records. Sociodemographic and clinical data were extracted from medical records using a standardized survey form previously validated at the department level.

2.5. Study variables

Sociodemographic variables included prevalence, sex, age, occupation, and marital status. Clinical variables concerned the types of personality disorders and alcohol dependence. Personality disorders were classified according to ICD-10 [8]. Alcohol use was assessed using the AUDIT [7], and dependence severity was categorized as mild, moderate, or severe according to DSM-5 criteria [6]. The main analytical variable was the relationship between alcohol dependence severity and sociodemographic characteristics as well as the types of personality disorders.

2.6. Statistical analysis

Data were entered and processed using Epi Info. Qualitative variables were summarized as counts and percentages. Bivariate analysis relied on contingency tables. The Chi-square test was used for overall assessment of associations, and Fisher's exact test was applied when cell counts were small. Results were considered statistically significant for a p value below 0.05.

2.7. Ethical considerations

The study was conducted after authorization from the head of department, in compliance with confidentiality, anonymity, and patients' informed consent. This research was carried out without external funding or specific financial support.

3. Results

3.1. Hospital prevalence and sociodemographic characteristics

Among the 1,797 patients managed in psychiatry at CHUAT during the study period, 30 met the inclusion criteria, corresponding to an hospital prevalence of 1.67%. Men represented 73.33% of cases (n=22) and women 26.67% (n=8), with a sex ratio of 2.75. The mean age was 38 years, with predominance of the 40–49-year age group (30.00%). Patients working in the tertiary sector represented 56.67% of the sample, and single individuals accounted for 43.33%.

3.2. Clinical profile

Clinically, the most frequent personality disorders were antisocial personality disorder and emotionally unstable personality disorder of the impulsive/borderline type, each found in 43.33% of cases. Alcohol dependence was mild in 6.67% of cases, moderate in 60.00%, and severe in 33.33%.

Table 1 Summarizes the main sociodemographic and clinical characteristics of the included patients. It highlights the weight of antisocial and borderline/impulsive profiles as well as the high frequency of moderate to severe alcohol dependence

Variable	Count (n)	Percentage (%)
Male sex	22	73.33
Female sex	8	26.67
Age 40–49 years	9	30.00
Tertiary sector	17	56.67
Single	13	43.33
Antisocial personality	13	43.33
Emotionally unstable/impulsive personality (borderline)	13	43.33
Schizoid personality	2	6.67
Paranoid personality	1	3.33
Dependent personality	1	3.33
Mild alcohol dependence	2	6.67
Moderate alcohol dependence	18	60.00
Severe alcohol dependence	10	33.33

3.3. Bivariate analysis

Bivariate analysis found a statistically significant association between age and the severity of alcohol dependence (p=0.0027). In contrast, no significant association was observed for sex (p=0.2108), occupation (p=0.6910), marital status (p=0.2473), or the type of personality disorder (p>0.05).

Table 2 Groups the main analytical results available. It shows that, among patients with severe alcohol dependence, antisocial personality disorder was the most frequently observed. However, this distribution did not reach the threshold of statistical significance

Domain	Category	Severe dependence (n)	Non-severe dependence (n)	p
Sociodemographic	Sex	—	—	0.2108
	Age (overall association)	—	—	0.0027*
	Occupation	—	—	0.6910
	Marital status	—	—	0.2473
Personality disorders	Paranoid	0	1	>0.05
	Schizoid	1	1	>0.05
	Antisocial	6	7	0.2552
	Emotionally unstable/impulsive	1	7	0.2102
	Dependent	0	1	>0.05
	Specific or mixed	2	3	>0.05

4. Discussion

The present study highlights a hospital prevalence of 1.67% of personality disorders among alcohol-dependent patients followed in psychiatry in Toamasina. This frequency is lower than those generally reported in the international literature, where the coexistence of personality disorders and alcohol use disorder is described as frequent, especially in specialized clinical settings [12,13]. This difference may be explained by the study's monocentric design, limitations inherent to hospital recruitment, and the possibility of under-identification of personality disorders in routine practice.

Patients were predominantly middle-aged men, with predominance of the 40–49-year age group. This observation is consistent with data showing that alcohol-related disorders often peak in adulthood, a period during which occupational and family factors accumulate alongside chronic drinking trajectories [14,15]. In our study, age appeared to be the only sociodemographic factor significantly associated with dependence severity, which is consistent with the idea of a cumulative effect of alcohol exposure over time [16].

The overrepresentation of the tertiary sector among included patients deserves emphasis. Service occupations may expose individuals to pace-related constraints, irregular schedules, and psychosocial stressors that may favor or maintain drinking behaviors. However, occupation was not significantly associated with the severity of alcohol dependence, suggesting that workplace contextual factors alone are insufficient to explain the clinical intensity of dependence [17].

From a psychopathological perspective, antisocial and emotionally unstable personality disorders of the impulsive/borderline type were largely dominant. This pattern is consistent with the literature, which describes frequent overlap between alcohol dependence, impulsivity, emotional instability, and transgressive behaviors [18]. Despite this, we did not find a statistically significant association between the type of personality disorder and the severity of dependence. This result may be related to the small sample size and the heterogeneity of clinical profiles.

Finally, the predominance of moderate and severe forms of dependence observed in our series reminds us that patients often seek care at an already advanced stage of their disorder. In low-resource settings, delayed access to care, social normalization of certain drinking behaviors, and stigma surrounding mental disorders may postpone identification and management [19]. In this perspective, a clinical approach that systematically integrates personality assessment in alcohol-dependent patients could allow better individualization of the therapeutic plan and more appropriate long-term follow-up [20].

Limitations

This study has several limitations. Its monocentric design restricts the generalizability of the results. The sample size is modest, reducing the statistical power of the analyses. In addition, data collection relied on medical record review and may therefore have been exposed to missing information or heterogeneity in clinical assessment. Finally, the absence of multivariable analysis does not allow estimation of the independent effect of the different factors studied.

5. Conclusion

This hospital-based study conducted in Toamasina shows that the personality disorders observed among alcohol-dependent patients mainly involved antisocial and borderline/impulsive profiles, in a context where moderate and severe forms of alcohol dependence were predominant. Age was the only factor significantly associated with dependence severity. Systematic screening for personality disorders in alcohol-dependent patients should be integrated into routine psychiatric practice in order to improve prognostic assessment, tailor management, and prevent relapse.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare no competing interests.

Authors' contributions

- Herilanja Hiarenantsoa Ratobimanankasina: conceptualization; methodology; investigation; data curation; formal analysis; drafting of the original version; project administration.
- Aina Razakandrany: critical review; manuscript revision; validation; supervision.
- Evah Norotiana Raobelle: critical review; manuscript revision; validation.
- Bertille Hortense Rajaonarison: critical review; manuscript revision; validation; supervision.
- Adeline Raharivelo: critical review; manuscript revision; validation; supervision.

All authors have read and approved the final version of the manuscript.

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