


# An Investigation into the Use of Psychoactive Substances among Sex Workers at an Urban Displacement Site in Bamako (Mali, 2025)

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**How to cite this paper:** Diawara, F., Sangaré, B., Touré, A., Dena, S.T. and Dabo, A.S. (2026) An Investigation into the Use of Psychoactive Substances among Sex Workers at an Urban Displacement Site in Bamako (Mali, 2025). *Open Journal of Epidemiology*, 16, 285-293.

<https://doi.org/10.4236/ojepi.2026.162021>

**Received:** April 1, 2026

**Accepted:** April 27, 2026

**Published:** April 30, 2026

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## Abstract

**Introduction:** In highly precarious settings, the use of psychoactive substances exacerbates health and social vulnerabilities, particularly among sex workers. It is associated with increased exposure to infections, violence and mental health problems. Despite these challenges, data remain limited in Mali. This study aims to explore the use of psychoactive substances within this specific population. **Methodology:** A descriptive cross-sectional study with quantitative approaches was conducted among 30 sex workers based at an urban displacement site in Bamako. Data were collected using structured questionnaires and individual interviews, then analysed using SPSS. **Results:** The participants were predominantly young (16 - 24 years old) and had little formal education (33.4%) and were not in education (63.3%). More than half (56.7%) reported using at least one psychoactive substance, with regular use in more than half of the cases. Tobacco was by far the most common, followed by tramadol, alcohol and cannabis. Furthermore, high levels of exposure to violence were reported: 93% for physical violence and 70% for sexual violence. **Conclusion:** Psychoactive substance use was common in our setting, which is characterised by a range of multiple vulnerabilities. Integrated interventions, focused on harm reduction and psychosocial support, appear essential for improving health.

## Keywords

Psychoactive Substances, Sex Workers, Violence, Vulnerability, Mali

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## 1. Introduction

Drug use is a health issue among people involved in sex work [1]-[3]. In precarious environments, it is often part of a struggle for survival, a means of coping with stress, or a way of adapting to the demands of the job [4]. In Mali, this issue particularly affects marginalised young people, especially those living on the streets or in camps for internally displaced persons [5]. In these contexts, prostitution frequently becomes an economic strategy, exposing these young women to increased risks [5]-[7]. The use of psychoactive substances, which is widespread in these communities sometimes due to easy access to the products [8], contributes to increasing their vulnerability to violence, exploitation and infections [9].

In Bamako, sex workers exhibit risky behaviors including the consumption of alcohol and tobacco before sexual intercourse, which can influence their exposure to health risks [10].

Despite the scale of the phenomenon, the research available in Mali remains focused on the general population. The specific realities of sex workers, particularly those experiencing displacement, social breakdown or circular migration, remain insufficiently documented. This study therefore aims to address this gap by analysing patterns of psychoactive substance use.

## 2. Methodology

### 2.1. Study Setting

The study was conducted at a settlement for internally displaced persons located within the urban fabric of Bamako. This settlement is characterised by precarious socio-economic conditions and marked social porosity. It not only accommodates victims of displacement but also serves as a gathering point for a transient population experiencing social breakdown. Consequently, the sex workers interviewed had varied backgrounds, with some having been forcibly displaced, whilst others came from neighbouring neighbourhoods or were engaged in circular migration.

### 2.2. Study Design and Period

This is a descriptive cross-sectional study based on a quantitative approach. The study took place from April to June 2025.

### 2.3. Population and Sampling

The study involved sex workers aged between 13 and 25 who had been working for at least three months. Due to the difficulty in accessing this population (self-protection, mistrust), snowball sampling was used, enabling the recruitment of 30 participants. The snowball sampling process involved identifying two initial participants—working women from the community, referred to as “seeds”—who were already connected to stakeholders in the field. Their role was crucial in establishing connections with other members of this community while fostering a climate of trust. In total, 35 workers were contacted. Of these, 30 had participants

to join, representing a participation rate of 85.7%. The five refusals observed were largely due to a distrust of the anonymity offered, stemming from time constraints inherent to their professional activities.

Recruitment was completed with 30 participants. This number was chosen based on the exhaustion of networking resources within the site's limited geographical scope. Any eligible person who was not physically or mentally capable of answering the questions was excluded from the study.

Data were collected using a structured questionnaire during confidential individual interviews focusing on the main variables: sociodemographic characteristics, consumption habits and experiences of violence.

#### **2.4. Data Analysis**

Quantitative analyses were carried out using SPSS version 16; quantitative variables were expressed as means and standard deviations. The descriptive analysis consisted of describing the study sample. The quantitative variables were presented as means and standard deviations, whilst the qualitative variables were presented as percentages

#### **2.5. Ethical Considerations**

Authorisation was obtained from the administrative and traditional authorities prior to conducting the study. Participants were informed of the objectives and purpose of the study. Participation was voluntary and based on free and informed consent, as well as their right to refuse or interrupt the interview at any time, without constraint

Although this protocol had not received approval from an official ethics committee, the study was conducted in accordance with the fundamental ethical principles governing research. Informed consent was obtained systematically. Regarding minor participants, aged 13 to 17, who find themselves in situations of family breakdown, homelessness, or forced displacement, making access to legal guardians impossible, we have opted for an informed consent procedure with the guardian at the site level. The principles of beneficence and non-maleficence were ensured by the anonymization of data, by the assignment of identification numbers, as well as by the scrupulous respect for confidentiality. To compensate for the absence of institutional supervision, a procedure for referral to psychosocial support services, accessible via the site, had been established for any participant showing distress in relation to the violence mentioned.

A unique identification number was assigned to each participant to ensure anonymity. The precise location of the study site has not been disclosed in this paper; we have identified it as a site for internally displaced persons in an urban area of Bamako. This confidentiality measure aims to strengthen the protection of participants against stigmatisation and to prevent any potential legal or social repercussions linked to the sensitive nature of the phenomenon under study.

### 3. Results

#### 3.1. Characteristics of the Participants

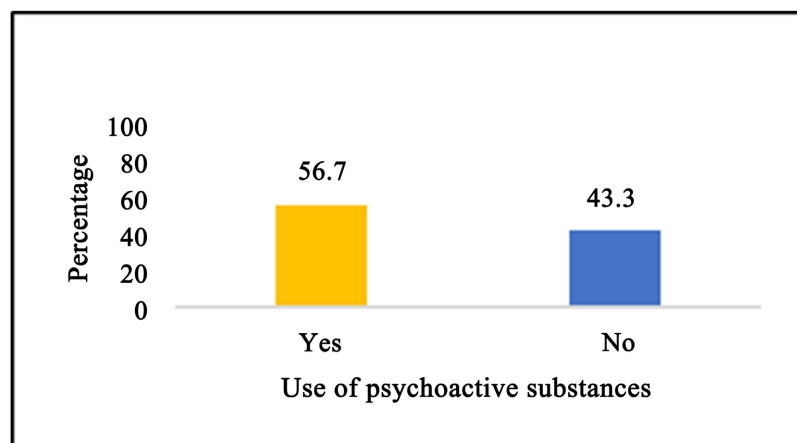
The majority of participants were aged between 16 and 24. Educational attainment was generally low, with a high proportion of those who had never attended school (Table 1).

**Table 1.** Breakdown of participants by socio-demographic characteristics.

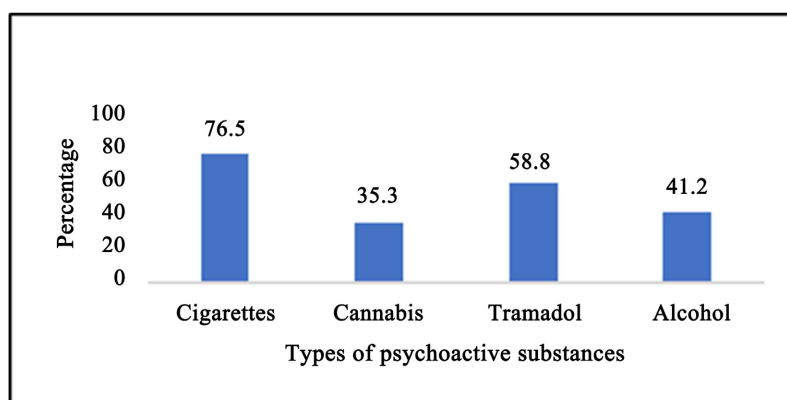
Socio-demographic variables	Frequency (n = 30)	%
Background of origin		
Rural	14	46.7
Urban	16	53.3
Age group (years)		
13 - 15	2	6.6
16 - 17	14	46.7
18 - 24	14	46.7
Educational level		
Not in education	19	63.3
Primary	5	16.7
Secondary	5	16.7
Higher education	1	3.3

#### 3.2. Use of Psychoactive Substances

More than one in two participants 17/30 reported using psychoactive substances (56.7%) (Figure 1). Tobacco was the most commonly used substance, followed by tramadol, alcohol and cannabis, at 76.5% (13/17), 58.8% (10/17), 41.2% (7/17) and 35.3% (6/17) respectively (Figure 2). Regular use was reported by more than half of the users, with instances of poly-substance use observed.



**Figure 1.** Breakdown of participants by psychoactive substance use.



**Figure 2.** Breakdown of participants by type of psychoactive substance used.

### 3.3. Exposure to Violence

Violence was virtually ubiquitous: the majority of participants reported physical violence (93.3%), and a significant proportion reported sexual violence (70%) (Table 2).

**Table 2.** Breakdown of respondents by type of violence experienced during their career.

Type of violence	Frequency (n = 30)	%
Physical violence		
Yes	28	93.3
No	2	6.7
Sexual violence		
Yes	21	70.0
No	9	30.0

## 4. Discussion

The study's findings clearly demonstrate a high prevalence of psychoactive substance use among sex workers living in a context of internal displacement in urban areas of Bamako. Beyond the observed frequency, these findings reflect a more complex reality, characterised by the intertwining of socio-economic, cultural and structural factors specific to the Malian context.

### 4.1. Psychoactive Substance Use in a Context of Vulnerability

The results confirm that psychoactive substance use was common among sex workers in precarious circumstances, corroborating the findings of other authors [4] [11] [12]. According to the literature, the motivations for use appear to be varied: stress management, adapting to the demands of work, or seeking to enhance performance and stamina [4]-[13]. Sites for internally displaced persons in Mali often constitute spaces of social reconstruction where poverty, insecurity and

limited access to health services coexist. In this context, the use of psychoactive substances may appear as a coping strategy in the face of daily pressures, particularly to alleviate stress, fear or trauma linked to life experiences. The substances identified in our study were similar to those observed in other international contexts, where tobacco, alcohol and misused medicines predominate [1]-[14]. A study in Marocco highlights that some sex workers combine alcohol, tobacco and other substances, influencing their health behavior [15]. In Mali, the use of certain substances such as tramadol or alcohol may also be influenced by their relatively easy availability on informal markets, a phenomenon well documented in major West African cities. The consumption observed among sex workers is part of an urban context in Mali characterized by the misuse of psychoactive substances [8]. In Bamako (Mali), where the consumption of psychoactive substances, particularly alcohol, is associated with risky sexual behavior among sex workers [10]-[16]. This availability contributes to the normalisation of their use, including among young and vulnerable populations. According to other authors, these practices are part of an environment marked by strong social influences and economic constraints [9]-[17].

#### **4.2. Socio-Cultural Dimension of Substance Use**

Beyond economic determinants, substance use practices can also be embedded within specific socio-cultural dynamics. The link between substances, economic vulnerability and entry into sex work has been established by Malian authors [18]. In the Malian context, characterised by strong social and religious norms, the use of psychoactive substances among women, and particularly among sex workers, is likely highly stigmatised. This stigma would reinforce their social marginalisation and limit their access to health services or support mechanisms.

Furthermore, some participants may integrate these these practices into socialisation patterns within their professional environment. Substance use can thus play a role in managing interactions with clients, by reducing anxiety, increasing disinhibition or facilitating resilience in the face of the demands of sex work.

#### **4.3. Violence and Structural Vulnerability**

Furthermore, the high prevalence of violence observed in our study reflects the structural vulnerability of this population, as described by some authors [6]-[10]. The literature often highlights complex interactions between substance use and exposure to violence [16]. Violent behaviour among sex workers is thought to be linked to intoxication following substance use [19].

The high levels of violence reported in this study illustrate a situation of particularly marked structural vulnerability. In the context of sites for internally displaced persons in Mali, the absence of formal protection mechanisms, overcrowding and precarious living conditions increase exposure to physical and sexual violence. The interaction between substance use and exposure to violence appears to be bidirectional to the literature. Toujours selon les informations de la littérature

ture, on the one hand, substance use may increase exposure to high-risk situations by impairing judgement or the ability to negotiate. On the other hand, the violence experienced may act as a trigger or aggravating factor for substance use, as a coping mechanism in the face of trauma.

## 5. Conclusions

This study provides concrete evidence of significant psychoactive substance use among internally displaced sex workers, in a context marked by frequent violence and precarious living conditions.

These findings highlight the urgent need to implement appropriate public health interventions, incorporating harm reduction, psychosocial support and community engagement. A comprehensive, context-sensitive and human rights-centred approach is essential to sustainably improve the health and safety of this population.

## 6. Implications for Public Health in Mali

These findings underscore the need for an integrated and context-specific approach to public health interventions. In the Malian context, strategies must go beyond traditional approaches focused solely on reducing consumption.

It appears essential to: 1) strengthen harm reduction interventions tailored to sex workers; 2) integrate psychosocial support that takes into account trauma and violence; 3) improve access to health services in highly vulnerable areas, particularly sites housing internally displaced persons; 4) involve community stakeholders to reduce stigma and promote the acceptability of interventions.

Finally, an approach sensitive to local socio-cultural realities is essential to ensure the effectiveness and sustainability of interventions.

## Limitations of the Study

This study has certain limitations. The small sample size and the use of non-probability sampling limit the generalisability of the results. However, these methodological choices were appropriate for a hard-to-reach population.

The cross-sectional nature of the study does not allow for the establishment of causal links between substance use and exposure to violence, but provides a relevant description in a poorly documented context.

Finally, self-reported data may be subject to under-reporting bias due to the sensitive nature of the topics addressed, despite the anonymity safeguards put in place.

## Acknowledgements

The authors would like to express their deep gratitude to all the participants who agreed to share their experiences in a particularly sensitive context. Their contribution was essential to the completion of this study.

We would also like to thank the administrative and community authorities at

the site for internally displaced persons for their cooperation and support during the data collection process.

Finally, our thanks go to all the interviewers and facilitators for their commitment in the field, as well as to the institutions that provided technical support for this research.

### Conflicts of Interest

The authors declare that they have no conflicts of interest in relation to the writing of this paper.

### References

- [1] Molnar, L., Biscontin, G. and Pongelli, S. (2021) La consommation de produits psychoactifs et de médicaments chez les personnes travailleuses du sexe dans le canton de Vaud (Suisse): Une étude exploratoire. *Revue internationale de criminologie et de police technique et scientifique*, **72**, 23-42.
- [2] Shannon, K., Strathdee, S.A., Goldenberg, S.M., Duff, P., Mwangi, P., Rusakova, M., *et al.* (2015) Global Epidemiology of HIV among Female Sex Workers: Influence of Structural Determinants. *The Lancet*, **385**, 55-71. [https://doi.org/10.1016/s0140-6736\(14\)60931-4](https://doi.org/10.1016/s0140-6736(14)60931-4)
- [3] Brooks-Gordon, B., Morris, M. and Sanders, T. (2021) Harm Reduction and Decriminalization of Sex Work: Introduction to the Special Section. *Sexuality Research and Social Policy*, **18**, 809-818. <https://doi.org/10.1007/s13178-021-00636-0>
- [4] Scorgie, F., Vasey, K., Harper, E., Richter, M., Nare, P., Maseko, S., *et al.* (2013) Human Rights Abuses and Collective Resilience among Sex Workers in Four African Countries: A Qualitative Study. *Globalization and Health*, **9**, Article No. 33. <https://doi.org/10.1186/1744-8603-9-33>
- [5] Ministère de la Solidarité et de l'Action Humanitaire du Mali (2017) Exclusion sociale des jeunes en situation de rue.
- [6] Argento, E., Goldenberg, S.M., Braschel, M., *et al.* (2020) Structural Factors Associated with Substance Use among Sex Workers: A Systematic Review. *The Lancet Public Health*, **5**, e611-e622.
- [7] Papworth, E., *et al.* (2021) HIV Risk and Prevention among Female Sex Workers in Sub-Saharan Africa: New Insights. *Current Opinion in HIV and AIDS*, **16**, 215-221.
- [8] Diallo, T., Diara, A., Coulibaly, S. K., Konaté, Y., Hami, H., Soulaymani, A. and Maïga, A. (2021) Misuse of Drugs in the District of Bamako, Mali. *E3S Web of Conferences*, **319**, Article ID: 02019. <https://doi.org/10.1051/e3sconf/202131902019>
- [9] Degenhardt, L., *et al.* (2021) Global Burden of Disease Attributable to Illicit Drug Use: Findings from the Global Burden of Disease Study 2019. *The Lancet Psychiatry*, **8**, 860-873.
- [10] Dohinnon, C., Traoré, F., Mounkoro, N., Musuenge, B. and Poda, G. G. (2021) Sexual Risk Behaviors of Sex Workers for HIV/AIDS and STIs in the City of Bamako, Mali. *Journal of Clinical Research in HIV/AIDS and Prevention*, **4**, 35-43. <https://doi.org/10.14302/issn.2324-7339/jcrhap-21-4010>
- [11] Goldenberg, S.M., Montaner, J., Duff, P., Nguyen, P., Dobrer, S., Guillemi, S., *et al.* (2015) Structural Barriers to Antiretroviral Therapy among Sex Workers Living with HIV: Findings of a Longitudinal Study in Vancouver, Canada. *AIDS and Behavior*, **20**, 977-986. <https://doi.org/10.1007/s10461-015-1102-2>

- [12] Jaffe, K., Nosova, F., Maher, L., et al. (2021) Income Generation and Patterns of Substance Use: A Gender-Based Analysis. *Drug and Alcohol Dependence*, **226**, Article ID: 108862. <https://doi.org/10.1016/j.drugalcdep.2021.108862>
- [13] Maxwell, S., Shahmanesh, M. and Gafos, M. (2019) Chemsex Behaviours among Men Who Have Sex with Men: A Systematic Review of the Literature. *International Journal of Drug Policy*, **63**, 74-89. <https://doi.org/10.1016/j.drugpo.2018.11.014>
- [14] Iversen, J., Long, P., Lutnick, A. and Maher, L. (2021) Patterns and Epidemiology of Illicit Drug Use among Sex Workers Globally: A Systematic Review. In: Goldenberg, S.M., Morgan Thomas, R., Forbes, A. And Baral, S. (Eds.), *Sex Work, Health, and Human Rights*, Springer International Publishing, 95-118. [https://doi.org/10.1007/978-3-030-64171-9\\_6](https://doi.org/10.1007/978-3-030-64171-9_6)
- [15] Moussa, A.B., Badahdah, A.M., Hidous, K., Barakad, R., Diallo, F., Traoré, M., Khodabocus, N., Ebsen Treebhoobun, A., Delabre, R., Rojas Castro, D., Ouarsas, L. and Karkouri, M. (2024) Barriers to Oral PrEP: A Qualitative Study of Female Sex Workers, PrEP Prescribers, Policymakers, and Community Advocates in Morocco. *Journal of the International Association of Providers of AIDS Care*, **23**. <https://doi.org/10.1177/23259582241266691>
- [16] Jones, H.S., Anderson, R.L., Cust, H., McClelland, R.S., Richardson, B.A., Thirumurthy, H., Malama, K., Hensen, B., Platt, L., Rice, B., Cowan, F.M., Imai-Eaton, J.W., Hargreaves, J.R. and Stevens, O. (2024) HIV Incidence among Women Engaging in Sex Work in Sub-Saharan Africa: A Systematic Review and Meta-Analysis. *The Lancet Global Health*, **12**, E1244-E1260. [https://doi.org/10.1016/S2214-109X\(24\)00227-4](https://doi.org/10.1016/S2214-109X(24)00227-4)
- [17] Kroubo, K.G.C. (2024) Analyse des perceptions des usages de drogues et de compléments alimentaires et corporels chez les prostituées à Abidjan. *Iris*, **44**. <https://doi.org/10.35562/iris.3843>
- [18] Kounta, C.H., Sagaon-Teyssier, L., Balique, H., Diallo, F., Kalampalikis, N., Mora, M., Bourrelly, M., Suzan-Monti, M., Spire, B. and Keita, B.D. (2019) Sex Work among Female Workers in the Traditional Mining Sector in Mali—Results from the ANRS-12339 Sanu Gundo Cross-Sectional Study in 2015. *African Journal of AIDS Research: AJAR*, **18**, 215-223. <https://doi.org/10.2989/16085906.2019.1653330>
- [19] Footer, K.H.A., Silberzahn, B.E., Lim, S., Huettner, S., Kumar, V.A., Loeffler, D., et al. (2020) “An Ethnographic Exploration of Factors That Drive Policing of Street-Based Female Sex Workers in a U.S. Setting—Identifying Opportunities for Intervention”. *BMC International Health and Human Rights*, **20**, Article No. 12. <https://doi.org/10.1186/s12914-020-00232-0>