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THE NEXUS BETWEEN MENTAL HEALTH AND CRIMINAL BEHAVIOUR AMONG EX-CONVICTS IN NIGERIAN SOCIETY

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ABSTRACT

The relationship between mental health disorders and criminal recidivism among ex-convicts constitutes a critical but underexplored nexus in Nigerian criminology. This study examined the prevalence of mental health disorders among ex-convicts (n = 300) compared to a matched community control group (n = 300) across five Nigerian prisons, and evaluated the predictive value of specific mental health diagnoses for two-year recidivism using binary logistic regression. Clinical assessments employed the Mini International Neuropsychiatric Interview (MINI), the PTSD Checklist for DSM-5 (PCL-5), and the Drug Abuse Screening Test (DAST-10). Findings reveal that 82.7% of ex-convicts met criteria for at least one mental health disorder, compared to 29.7% in the control group (OR = 11.23, 95% CI [7.34, 17.18], p < 0.001). Substance Use Disorder (70.7%), Major Depressive Disorder (62.3%), and PTSD (47.7%) were the most prevalent diagnoses. Binary logistic regression identified Antisocial Personality Disorder (OR = 5.12), PTSD (OR = 4.31), and Substance Use Disorder (OR = 3.87) as the strongest independent predictors of recidivism. Prison mental health screening rates averaged only 27.3% nationally, with treatment access at 16.2%. The study concludes that Nigeria's prison system constitutes a mental health crisis requiring systematic psychiatric integration, trauma-informed rehabilitation, and community-based aftercare to break the mental health-crime recidivism cycle.

Keywords: *mental health, recidivism, ex-convicts, Nigeria, substance use disorder, PTSD, criminal behaviour*

INTRODUCTION

The relationship between mental health and criminal behaviour has occupied criminological and psychiatric inquiry for over a century, yet its implications for penal policy remain systematically underaddressed in sub-Saharan Africa, and in Nigeria in particular. Research from high-income countries consistently demonstrates that individuals with mental health disorders are overrepresented in prison populations at rates two to four times higher than the general community (Fazel & Danesh, 2002; Morgan et al., 2013). Upon release, ex-convicts with untreated mental health conditions face compounding vulnerabilities—unemployment, social stigma, housing instability, and severed family networks—that substantially elevate the

probability of reoffending and returning to custody, a phenomenon known as the revolving-door syndrome (Skeem et al., 2014).

Nigeria's criminal justice system confronts this challenge within a context of severe resource constraints and cultural stigmatisation of mental illness. The country's prisoner-to-prison ratio is among the most overcrowded in Africa, with facilities operating at an average of 254% capacity (NCoS, 2022). Mental health infrastructure is correspondingly deficient: Nigeria has fewer than 150 psychiatrists serving a population of 220 million, yielding a ratio of approximately 0.7 psychiatrists per 100,000 population against a WHO recommendation of 1 per 10,000 (WHO, 2021). Prison mental health services are largely absent outside a handful of facilities, and post-release community mental health support is virtually nonexistent in most states.

The intersection of these realities creates a criminogenic mental health ecosystem: untreated disorders drive offending, incarceration exacerbates psychiatric conditions through exposure to violence, trauma, and social deprivation, and inadequate reintegration support ensures that mental health remains a driver of repeat offending post-release. This study addresses this nexus through a case-control study design, comparing mental health disorder prevalence and clinical profiles between ex-convicts and matched community controls, and constructing a logistic regression model to identify the mental health predictors of recidivism. The theoretical framework is grounded in the Stress-Strain Theory (Agnew, 1992), which posits that negative emotional states arising from mental health conditions generate criminogenic pressure, and the General Strain Theory extension to prison populations by Listwan et al. (2010), which identifies incarceration-induced trauma as a recidivism amplifier.

The epidemiology of mental disorder in prison populations is well-established internationally. Fazel and Danesh's (2002) meta-analysis of 62 surveys covering 22,790 prisoners in 12 countries found that 65% of male prisoners had a personality disorder, 10% had a psychotic illness, and 12% had major depression—rates substantially exceeding community prevalence. More recent estimates suggest that the true comorbidity burden is higher still when substance use disorders are included (Morgan et al., 2013). In the recidivism literature, Skeem et al. (2014) established through a meta-analysis of 25 longitudinal studies that mental disorder does not directly cause recidivism but operates as a risk amplifier by exacerbating established criminogenic needs—antisocial cognition, antisocial association, and substance abuse.

In the Nigerian context, empirical research is sparse but illuminating. Abdulmalik et al. (2014) assessed psychiatric morbidity among 312 inmates at Kuje Prison, FCT, finding that 47% met diagnostic criteria for a mental disorder, with alcohol use disorder (28%), major depressive disorder (21%), and psychosis (11%) most prevalent. Gureje et al. (2019) documented the pervasive treatment gap in Nigerian mental health, estimating that 90% of Nigerians with a mental disorder receive no treatment of any kind, a figure that rises to near-totality among incarcerated populations. Nwoye (2015) examined the social and cultural dimensions of mental illness stigma in Nigeria, finding that supernatural explanations for mental disorder—witchcraft, divine punishment—remain prevalent and systematically impede help-seeking behaviour among ex-convicts reintegrating into communities where such beliefs prevail.

The role of Substance Use Disorder (SUD) as a criminogenic mental health condition is particularly salient in Nigeria. The United Nations Office on Drugs and Crime (2021) estimates that Nigeria has 14.4 million current drug users, with cannabis and opioids the most prevalent substances. Tramadol misuse—facilitated by widespread over-the-counter availability—has emerged as a specific driver of violent crime in the Northwest, with the National Drug Law Enforcement Agency (NDLEA) reporting a 340% increase in tramadol seizures between 2018 and 2022. Ikenna and Chizoba (2020) found that 73% of armed robbery convicts in Enugu State prisons reported regular substance use at the time of their index offence, while Abiodun et al.

(2019) documented a dose-response relationship between drug dependence severity and recidivism probability in a longitudinal study of 214 released offenders in Lagos.

Trauma-informed criminology provides the most operationally relevant theoretical lens for Nigerian ex-convict mental health. The Adverse Childhood Experiences (ACEs) framework, originally developed by Felitti et al. (1998), has been adapted to African prison contexts by Decker et al. (2021), who found that Nigerian prisoners report higher ACE scores than any other studied national cohort, with childhood exposure to domestic violence, parental substance abuse, and community conflict creating a neurobiological vulnerability to both mental disorder and criminogenic cognition. The implication is that rehabilitation without trauma-specific intervention is neurobiologically insufficient—a conclusion with profound implications for Nigeria's prison reform agenda.

METHODOLOGY

Study and Setting

A case-control study design was employed, comparing ex-convicts released within the preceding 24 months (cases, n = 300) with a matched community control group (controls, n = 300). The study was conducted across five Nigerian prisons: Kirikiri Maximum Security Prison (Lagos), Kuje Prison (FCT Abuja), Port Harcourt Prison (Rivers), Agodi Prison (Oyo), and Kaduna Prison. Sites were selected to represent the six geopolitical zones and varying levels of prison mental health service provision. Ethical approval was obtained from the National Health Research Ethics Committee (NHREC) (Ref: NHREC/01/01/2022-189) and the Nigerian Correctional Service (NCoS).

Sampling and Recruitment

Cases were recruited through systematic random sampling from NCoS post-release tracking registers, targeting individuals released from the five study prisons between January 2020 and December 2021. Controls were recruited from community health centres and matched to cases on age (±3 years), sex, local government area of residence, and educational attainment. Exclusion criteria included active psychosis at the time of assessment, inability to provide informed consent, and re-incarceration within 30 days of release. The final analytical sample comprised 300 cases and 300 controls (n = 600).

Instruments

Mental health assessment employed three validated instruments: (i) the Mini International Neuropsychiatric Interview Version 7.0 (MINI 7.0; Sheehan et al., 2016), a structured diagnostic interview for DSM-5 and ICD-10 disorders, validated for Nigerian populations by Abdulmalik et al. (2014); (ii) the PTSD Checklist for DSM-5 (PCL-5; Weathers et al., 2013), with a validated Nigerian cut-off score of ≥ 33; and (iii) the Drug Abuse Screening Test-10 (DAST-10; Skinner, 1982), with a cut-off score of ≥ 3 indicating probable substance use disorder. Recidivism was operationalised as any re-arrest or re-conviction within 24 months of release, ascertained through NCoS records and self-report.

Statistical Analysis

Prevalence differences between cases and controls were analysed using chi-square tests with Odds Ratios (ORs) and 95% confidence intervals. Recidivism predictors were identified through binary logistic regression with Enter method, controlling for age, sex, offence type, sentence length, and socioeconomic status. Model fit was assessed using the Hosmer-Lemeshow test ($p > 0.05$ indicating adequate fit) and Nagelkerke R^2. All analyses were conducted using IBM SPSS Statistics Version 28.0.

RESULTS

Prevalence of Mental Health Disorders

Table 1 presents the prevalence of mental health disorders among ex-convicts compared to community controls. The between-group differences are statistically significant across all diagnostic categories. Antisocial Personality Disorder conferred the highest odds ratio (OR = 15.74, 95% CI [7.87, 31.48]), indicating that ex-convicts are over 15 times more likely to meet ASPD diagnostic criteria than matched community controls. Substance Use Disorder was the most prevalent condition (70.7% of ex-convicts), followed by Major Depressive Disorder (62.3%) and PTSD (47.7%). The overall prevalence of any mental health disorder among ex-convicts (82.7%) is substantially higher than the community control rate (29.7%) and exceeds comparable estimates from prison population studies in Ghana (61%), Kenya (58%), and South Africa (72%).

The co-occurrence of multiple disorders was common: 54.7% of ex-convicts met criteria for two or more concurrent mental health disorders, with the SUD-PTSD dyad being the most prevalent comorbidity (38.3%), consistent with international literature on the trauma-substance pathway to criminal behaviour. Schizophrenia spectrum disorders, while less prevalent (13.7%), were more strongly associated with violent offending within the ex-convict sample, with 76% of individuals with psychotic disorders having index offences classified as violent.

Table 1: Prevalence of Mental Health Disorders Among Ex-Convicts vs. Community Controls (n = 600)

Mental Health Disorder	n (%)	Control n (%)	Odds Ratio (OR)	95% CI	p-value
Major Depressive Disorder	187 (62.3%)	43 (14.3%)	9.81	[6.73, 14.31]	< 0.001
Post-Traumatic Stress Disorder	143 (47.7%)	18 (6.0%)	13.62	[8.24, 22.51]	< 0.001
Antisocial Personality Disorder	98 (32.7%)	9 (3.0%)	15.74	[7.87, 31.48]	< 0.001
Substance Use Disorder	212 (70.7%)	61 (20.3%)	9.28	[6.47, 13.31]	< 0.001
Schizophrenia Spectrum	41 (13.7%)	7 (2.3%)	6.78	[2.99, 15.37]	< 0.001
Bipolar Disorder	67 (22.3%)	14 (4.7%)	5.89	[3.21, 10.81]	< 0.001
Any Mental Health Disorder	**248 (82.7%)**	**89 (29.7%)**	**11.23**	**[7.34, 17.18]**	**< 0.001**

Note: Diagnoses assessed using MINI 7.0, PCL-5, and DAST-10; Controls matched on age, sex, LGA, and educational attainment; OR = Odds Ratio

Mental Health Predictors of Recidivism

Table 2 presents the binary logistic regression model predicting two-year recidivism among ex-convicts. The overall model was highly significant ($\chi^2(6) = 198.4$, $p < 0.001$) with a Nagelkerke R^2 of 0.631, indicating that the model explains 63.1% of the variance in recidivism.

Table 2: Binary Logistic Regression — Mental Health Predictors of Two-Year Recidivism Among Ex-Convicts

Variable	Recidivism OR	Std. Error	Wald χ^2	p-value	Nagelkerke R^2
PTSD Diagnosis (yes/no)	4.31	0.52	68.4	< 0.001	
Substance Use Disorder	3.87	0.48	61.7	< 0.001	
Antisocial Personality Disorder	5.12	0.63	74.1	< 0.001	
Major Depressive Disorder	2.94	0.41	47.3	< 0.001	
Received Prison Counselling	0.34	0.19	29.8	< 0.001	
Employment Post-Release	0.27	0.16	38.4	< 0.001	
Model Fit (Full Model)			**$\chi^2(6)=198.4$**	**< 0.001**	**0.631**

Note: n = 300 ex-convicts; dependent variable = re-arrest/re-conviction within 24 months (yes/no); Hosmer-Lemeshow test: $\chi^2(8) = 7.34$, $p = 0.501$; OR = Odds Ratio

Antisocial Personality Disorder was the strongest recidivism predictor (OR = 5.12, $p < 0.001$), followed by PTSD (OR = 4.31, $p < 0.001$) and Substance Use Disorder (OR = 3.87, $p < 0.001$). Protective factors identified in the model were receipt of prison counselling (OR = 0.34, $p < 0.001$) and post-release employment (OR = 0.27, $p < 0.001$), indicating that therapeutic engagement during incarceration and economic reintegration post-release substantially reduce recidivism probability. The finding that counselling reduces recidivism odds by 66% (OR = 0.34) is particularly compelling given that only 16.2% of ex-convicts in the sample received any form of prison mental health treatment.

Prison Mental Health Service Landscape

Table 3 presents the mental health service data across the five study prisons, contextualised against national recidivism rates. Kaduna Prison recorded the lowest mental health screening rate (18.4%) and treatment access (9.7%), corresponding to the highest two-year recidivism rate (71.2%)—over 20 percentage points above the national average. Port Harcourt Prison, with the highest screening rate (41.3%) and treatment access (24.1%), recorded the lowest recidivism rate (54.3%).

Table 3: Mental Health Service Provision and Recidivism Rates Across Study Prisons

Prison/State	Total Ex-Convicts	Mental Health Screen Rate (%)	Treatment Access (%)	2-Year Recidivism Rate (%)	National Average Gap (%)
Kirikiri Max (Lagos)	1,847	34.2	18.7	62.4	+11.4
Kuje (FCT Abuja)	1,124	28.6	21.4	57.8	+6.8
Port Harcourt (Rivers)	934	41.3	24.1	54.3	+3.3
Agodi (Oyo)	876	22.8	12.4	68.9	+17.9
Kaduna Prison	1,203	18.4	9.7	71.2	+20.2
National Average	**N/A**	**27.3**	**16.2**	**51.0**	**Reference**

Source: Nigerian Correctional Service (NCoS) Records (2020–2023); Authors' Clinical Assessment Data; National average recidivism from NCoS Annual Report (2022)

The negative correlation between treatment access and recidivism rate ($r = -0.89$, $p < 0.05$) across the five prisons provides facility-level evidence consistent with the individual-level logistic regression findings. Kirikiri Maximum Security Prison, despite serving the highest-population state, recorded a screening rate of only 34.2%—a figure that reflects the scarcity of mental health personnel rather than lack of institutional willingness, as key informant data indicated that Kirikiri's single full-time psychologist serves a prisoner population of over 2,800.

DISCUSSION OF FINDINGS

The finding that 82.7% of ex-convicts meet criteria for at least one mental health disorder represents one of the highest prevalence estimates recorded in an African prison population, substantially exceeding figures reported in Ghana, Kenya, and South Africa. This may reflect Nigeria's specific combination of prison overcrowding, violence exposure, and complete absence of mental health intake screening in most facilities. The extreme overcrowding in Nigerian prisons—averaging 254% capacity—creates conditions of chronic stress, physical

threat, and social deprivation that are independently criminogenic in terms of their psychiatric impact, potentially inflating disorder prevalence above the admission baseline.

The identification of PTSD (OR = 4.31) and Substance Use Disorder (OR = 3.87) as independent recidivism predictors is consistent with international meta-analytic evidence (Skeem et al., 2014) and has direct treatment implications. Both conditions are amenable to evidence-based psychological intervention—PTSD through Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) and Eye Movement Desensitisation and Reprocessing (EMDR), and SUD through Motivational Enhancement Therapy (MET) and Cognitive Behavioural Therapy (CBT). The protective effect of prison counselling (OR = 0.34) provides direct empirical support for scaling these interventions within Nigerian correctional facilities.

The facility-level data (Table 3) reveal a natural experiment: prisons with higher treatment access consistently demonstrate lower recidivism rates, with the correlation (r = -0.89) suggesting that mental health treatment access explains approximately 79% of facility-level recidivism variance. This is a striking finding that policymakers should interpret cautiously—the correlation is across only five facilities and could be confounded by other institutional variables—but it is theoretically coherent and directionally consistent with the individual-level logistic regression results. The implication is that investment in prison mental health services is not merely humanitarian but economically rational: reducing recidivism reduces re-prosecution, re-incarceration, and victim costs that far exceed the per-capita cost of mental health treatment.

Conclusion

This study has provided the most comprehensive empirical examination to date of the mental health-criminal behaviour nexus among ex-convicts in Nigeria, establishing that mental health disorders are pervasive (82.7% prevalence), severely undertreated (16.2% treatment access), and powerfully predictive of recidivism. The logistic regression model—explaining 63.1% of recidivism variance—demonstrates that targeted mental health intervention addresses a measurable and modifiable driver of Nigeria's cycle of criminal recidivism. Antisocial Personality Disorder, PTSD, and Substance Use Disorder are the priority intervention targets; prison counselling and post-release employment are the priority protective factors to scale.**7.**

Recommendations

Based on the findings, the following recommendations are advanced: First, the Nigerian Correctional Service should mandate universal mental health screening at intake and discharge for all prisoners, employing standardised instruments such as the MINI 7.0 and PCL-5 adapted for the Nigerian context. Second, each of the 240 correctional facilities in Nigeria should be staffed with a minimum of one clinical psychologist and one community psychiatric nurse, funded through an Emergency Mental Health in Corrections Budget Line within the NCoS appropriation. Third, a National Ex-Convict Mental Health Reintegration Programme should be established, providing trauma-informed outpatient psychiatric support, substance use disorder treatment, and vocational training for a minimum of 24 months post-release. Fourth, the Federal Ministry of Justice should partner with the Federal Neuropsychiatric Hospital system to develop Prison Psychiatric Units in each state, providing inpatient care for prisoners with severe mental illness. Fifth, longitudinal research tracking the mental health trajectories of ex-convicts across five or more years post-release should be funded through the National Institute for Medical Research to build the evidence base for continuous policy refinement.

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