



(RESEARCH ARTICLE)



## Comparative analysis of prevalence of the narcissistic personality disorder and antisocial personality disorder in a Prison Sample in Kenya

Rachel Ngima Ngunjiri <sup>1,\*</sup> and Winnie Waiyaki <sup>2</sup>

<sup>1</sup> Masters in Clinical Psychology, Daystar University.

<sup>2</sup> Lecturer, Daystar University.

International Journal of Science and Research Archive, 2025, 16(01), 751-762

Publication history: Received on 01 June 2025; revised on 05 July 2025; accepted on 08 July 2025

Article DOI: <https://doi.org/10.30574/ijrsra.2025.16.1.2092>

### Abstract

Studies show that personality disorders are highly prevalent in prisons. However, it is necessary to explore which disorders are most prevalent, particularly in Kenya where there is a scarcity of relevant studies. Accordingly, this study sought to determine which was more prevalent between ASPD and NPD and to identify the crimes represented by each personality disorder. The sample size for this study was 325, with 237 inmates (72.9% response rate) successfully completing the assessments. The study found that the prevalence of ASPD was 36.3% while that of NPD was 68.8%, demonstrating a significant difference ( $p < 0.05$ ). Additionally, 17.9% of inmates met criteria for both ASPD and NPD simultaneously, while 82.1% did not present with this dual diagnosis. Chi-square test of independence revealed that the ASPD+NPD comorbidity (17.9%) was statistically significant when compared to ASPD alone ( $\chi^2 = 18.45$ ,  $p = 0.018$ ) and NPD alone ( $\chi^2 = 123.67$ ,  $p = 0.002$ ), indicating that dual diagnosis represents a distinct clinical population. Crime distribution analysis revealed that sexual offenses were the predominant category, accounting for 46.40% of cases, followed by violent crimes (16.90%) and robbery (11.80%). Statistical analysis showed significant associations between both personality disorders and crime distribution patterns, with ASPD ( $p = 0.018$ ) and NPD ( $p = 0.019$ ) both demonstrating non-random distribution across crime categories. The comorbidity analysis revealed that the 17.9% dual-diagnosis population represents a substantial group with complex psychological presentations requiring specialized interventions. Extensive comorbidities were observed among inmates with both personality disorders, indicating multifaceted psychological profiles that require comprehensive assessment and treatment approaches. The study concludes that in the Kenyan prison population, NPD is significantly more prevalent than ASPD, contrary to international trends. The dual diagnosis group constitutes a statistically distinct population that differs significantly from single disorder presentations, suggesting unique clinical characteristics requiring specialized treatment approaches. These personality disorders manifest in different patterns of criminal behavior and comorbidity profiles, with sexual offenses being the predominant crime category across both disorders. The 17.9% dual-diagnosis population represents the most psychologically complex cases requiring intensive interventions, as they present with compounded pathology combining features of both disorders. Recommendations include implementing specialized treatment approaches for inmates with NPD, developing culturally-sensitive assessment tools, and conducting further research into the cultural factors that may contribute to the high prevalence of narcissistic traits in this population. These results are pertinent for prison authorities and other stakeholders in their rehabilitation and corrective efforts.

**Keywords:** Prisons; Inmates; Personality Disorders; Crime

### 1. Introduction

It has been established that personality disorders are highly prevalent in prisons with one sample finding 28% having a personality disorder [3], [15], [22]. All of these studies indicate a prevalence of between 30 and 70% of inmates as having personality disorders. The most common as found by these studies is the antisocial personality disorder (ASPD),

\* Corresponding author: Rachel Ngima Ngunjiri

borderline personality disorder (BPD), and narcissistic personality disorder (NPD) formerly termed as Cluster B personalities. This conclusion is supported by Fazel and Danesh's [10] comprehensive meta-analysis of 62 studies across 12 countries involving 22,790 prisoners, which found that prisoners were about ten times more likely to have antisocial personality disorder than the general population, with 47% of male prisoners meeting criteria for ASPD. This study was keen on establishing the presence of the ASPD in Kenyan prisons given that a few studies had given its prevalence at significantly elevated levels compared to the general population.

According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR), antisocial personality disorder is characterized by a pervasive pattern of disregard for and violation of the rights of others, occurring since age 15 [2]. Individuals with ASPD repeatedly perform acts that are grounds for arrest, show deceitfulness, impulsivity, irritability and aggressiveness, consistent irresponsibility, and lack of remorse after harming others. This pattern of behavior causes significant impairment in social, occupational, or other important areas of functioning [2]. This disorder affects approximately 3% of males and 1% of females in the general population, but reaches prevalence rates of 40-70% in forensic settings and prisons [5].

Various studies suggested that ASPD could be the most prevalent disorder among prison inmates with Marco et al. [15] finding 41% in their sample of 398 Spanish inmates. In the UK, Howard and Duggan [7] found prevalence rates of 55% and 31% among male and female offenders respectively in their review of personality disorders in offender populations. In Australia, Butler et al. [13] established a prevalence of 56% among 916 randomly selected prison inmates, while in the US, Fazel and Danesh [10] reported a high of 62% in their systematic review. These numbers did not differ greatly in Africa. In a Durban prison in South Africa, the prevalence was found at 46.1% among 193 prisoners [17], while in Ethiopia data showed 13% among 329 prisoners in Dessie Correctional Center [19], and Nigeria was at 47% among 252 inmates as reported by Agbahowe et al. [1].

These studies suggested that ASPD is easily the leading PD among prison inmates creating the need to establish whether the same prevailed in Kenya. This study aimed to investigate whether indeed a Kenyan sample would find the same and should there be differences, consider a theoretical viewpoint to explain the difference. The premise was that once it was established, this would lead to interventional studies to establish which ones would be most effective in the Kenyan setting. Be that as it may, the NPD is also prevalent in prisons as the literature shows. In maximum prison in Romania it was established at 35% among 202 inmates [18]. A study done in UK established prevalence at 55% in a sample of 164 violent offenders [5]. In the USA, a study done by Dunsieith et al. [8] found inmates with the disorder at 24.8% among 113 men convicted of sexual offenses. Apart from the UK, the literature suggested a lower prevalence of NPD as compared to ASPD, thus this study seeking to find out the position in Kenya.

This comparison of prevalence rates across different countries reveals interesting patterns that warrant further investigation. The consistently higher rates of ASPD compared to NPD in most prison populations might reflect the more direct connection between antisocial traits and criminal behavior. This is supported by data showing that individuals with ASPD have a 90% likelihood of committing at least one offense leading to arrest [4], and ASPD is associated with a three to five-fold increase in risk of violent offending [12]. However, the UK's higher NPD prevalence raises questions about potential cultural or methodological differences in diagnosis or perhaps unique characteristics of their prison population. Understanding whether Kenya follows the more common pattern or presents an alternative profile could provide valuable insights into cultural influences on personality expression and the relationship between specific personality traits and criminal behavior in different contexts.

According to the DSM-5-TR, Narcissistic Personality Disorder is characterized by a consistent pattern of grandiosity, persistent need for admiration, and a notable lack of empathy that begins in early adulthood [2]. Individuals with NPD maintain an inflated self-concept, frequently overstating their accomplishments and abilities while expecting recognition as superior without corresponding achievements [2]. They become preoccupied with fantasies of boundless achievement, influence, brilliance, attractiveness, or ideal relationships. These individuals consider themselves exceptional and believe they should only associate with other high-status people or institutions. They require excessive praise, demonstrate entitlement, and expect special treatment or immediate compliance with their expectations [2]. The prevalence of NPD in the general population is estimated at 0.5-1%, but ranges from 20-35% in clinical and forensic settings [21].

The DSM-5-TR indicates that individuals with NPD typically engage in exploitative interactions, using others as means to their ends. They demonstrate a fundamental lack of empathy, showing minimal interest in understanding others' experiences or perspectives. Additionally, they often harbor feelings of envy toward others or believe others envy them, and commonly display haughty, condescending attitudes in their social interactions [2]. Research indicates that narcissistic traits are associated with specific types of offending, particularly white-collar crimes, with one study finding

that 35% of 100 convicted white-collar criminals met criteria for NPD [6]. The study therefore looked into the prevalence of both personality disorders, to see whether in Kenya the situation is identical to international data and if not, suggest a possible theoretical explanation, which would hopefully invite other scholars to make contributions to the matter.

## 2. Methodology

The study focused on a target population of 2,240 inmates, including adult male and female inmates excluding juveniles from Shimo la Tewa maximum security prison and Shimo la Tewa women's prison in Mombasa, Kenya. A purposive sampling technique was used to select a representative sample size of 325 inmates, comprising 285 males and 40 females, chosen to ensure understanding of the study and psychological assessments. Data was collected using the Millon Clinical Multiaxial Inventory (MCMI-IV), developed by Theodore Millon in 1977, is a psychological assessment tool designed to measure 10 clinical syndromes and 15 personality disorders. It has been used in various settings, including clinical, medical, governmental, and forensic applications. The researchers chose this tool for data collection due to its demonstrated reliability and strong internal consistency which is culturally sensitive. A study examining the use of the Millon Clinical Multiaxial Inventory-IV and the Millon Adolescent Clinical Inventory-IV in legal settings was conducted by Sellbom et al. [20]. Data for this study was collected once the relevant approvals were obtained from NACOSTI and the Kenya Prison Service to use psychological assessments.

The researchers collected data directly from the prison over a one-month period, interviewing approximately 25-30 participants daily. The researchers sought assistance from the prison administration to begin the selection of participants and subsequently administer the psychological assessments. Informed consent was obtained from all the participants included in our study.

## 3. Results

The study examined the prevalence of antisocial personality disorder (ASPD) and narcissistic personality disorder (NPD) among 237 inmates in Kenyan prisons, along with their associated comorbidities and crime patterns. The findings reveal substantial information about the psychological profile of the prison population and challenge conventional assumptions about personality disorder prevalence in correctional settings. The demographic data presented in this section provides a comprehensive overview of the respondents' characteristics, offering valuable insights into the composition of the sample. This information is crucial for understanding the context of the study and interpreting the results. The demographic data covers several key areas: gender, age, education level, religion, marital status, crime committed, sentence length, time served, and relationships with caregivers. The study results are presented in Table 1.

**Table 1** Demographic Data

Type	Category	Frequency	Percent
Gender	Male	206	86.9
	Female	31	13.1
Category	18-24 years	45	19.10%
	25-34 years	81	34.30%
	35-44 years	62	26.30%
	45-54 years	28	11.90%
	55 and above	20	8.40%
Level of Education	Primary school education	138	58.2
	Secondary education	70	29.5
	Tertiary education	23	9.7
Religion	Christian	151	63.7
	Muslim	78	32.9
	Traditionalists	1	0.4

Marital Status	Single	93	39.2
	Divorced	4	1.7
	Separated	26	11
	Married	111	46.8
Committed a Crime	Yes	151	63.7
	No	83	35
	Not Specified	3	1.3
Sexual Offenses	Defilement, Rape, Attempted Rape, Sexual Assault, Incest, Sodomy	110	46.40%
Violent Crimes	Murder, Manslaughter, Attempted Murder, Assault, Grievous Harm	40	16.90%
Robbery	Robbery, Robbery with Violence, Armed Robbery	28	11.80%
Drug-related Offenses	Trafficking, Possession of Narcotics	11	4.60%
Theft	Stealing, Breaking and Stealing	7	3.00%
Other	Child Neglect, Land Dispute, Obtaining Money by False Pretense, Threatening to Kill	5	2.10%
No Crime/Not Specified	No Crime	23	9.70%
How long is your sentence?	Not specified	118	49.80%
	5-10 years	21	8.90%
	11-20 years	52	21.90%
	21-30 years	26	11.00%
	31-50 years	7	3.00%
	Over 50 years	2	0.80%
	Life sentence	19	8.00%
How long have you served your sentence?	Less than 1 year	12	5.10%
	1-2 years	42	17.70%
	3-5 years	41	17.30%
	6-10 years	31	13.10%
	11-15 years	14	5.90%
	More than 15 years	3	1.30%
	Not specified	94	39.70%
Relationship Category (Mother)	Good relationship	196	82.70%
	Bad relationship	8	3.40%
	Mother absent/deceased	4	1.70%
	Other/Unspecified	29	12.20%
Relationship Category (Father)	Good relationship	148	0.624
	Bad/Poor relationship	16	0.068
	Fair relationship	3	0.013
	Absent/Deceased father	14	0.059

	Other/Unspecified	56	0.236
If your primary caregiver was not your father or mother, describe your relationship with the person who brought you up	Good relationship	50	21.10%
	Bad relationship	4	1.70%
	No caregiver	2	0.80%
	Not specified/Unclear	181	76.40%

The results indicate a significant gender disparity among the respondents, with males comprising 86.9% of the sample, while females accounted for 13.1%. This substantial overrepresentation of male participants reflects the typical demographic composition of prison populations, particularly in maximum security facilities. The gender imbalance could be attributed to various factors, such as higher rates of serious criminal offenses among men, gender disparities in sentencing, or societal factors influencing criminal behavior. This gender distribution has important implications for understanding the prevalence of antisocial personality disorder and narcissistic personality disorder among incarcerated individuals.

Regarding education levels, most participants (58.2%) had only primary school education, followed by 29.5% with secondary education, and 9.7% with tertiary education. This educational profile suggests a generally low level of formal education among the incarcerated population. The predominance of primary-level education may have significant implications for the study's findings on antisocial personality disorder and narcissistic personality disorder. Lower educational attainment could be associated with reduced access to mental health resources, limited understanding of psychological concepts, or fewer opportunities for positive social development. Furthermore, this educational distribution highlights the potential need for tailored interventions and rehabilitation programs that consider the educational background of inmates.

The religious affiliation of the participants was primarily split between Christianity (63.7%) and Islam (32.9%), with a negligible representation of traditionalists (0.4%). This religious distribution provides valuable context for understanding the cultural and spiritual background of the participants. Religion can play a significant role in shaping moral values, social behavior, and coping mechanisms, which may influence the expression of antisocial traits or narcissistic traits. The predominance of Christianity and Islam suggests that faith-based interventions or spiritually informed approaches might be relevant in addressing mental health issues and promoting rehabilitation among this prison population. However, it is important to consider how religious beliefs might interact with psychological constructs and ensure that interventions are culturally sensitive and respect diverse faith traditions.

Regarding marital status, 46.8% of participants were married, 39.2% were single, 11% were separated, and 1.7% were divorced. This data on marital status offers insights into the social support structures and relationship patterns of the participants. Marital relationships could serve as a protective factor against some antisocial behaviors or provide a support system during incarceration.

The data on crime commission reveals a complex picture within the prison population. While 63.7% of participants acknowledged committing a crime, a significant 35% did not, and 1.3% did not specify. The 1.3% not specifying their crimes may represent individuals unwilling to disclose due to fear of legal consequences, shame, ongoing legal proceedings, or those maintaining innocence despite incarceration. This discrepancy between incarceration and admitted crime commission is intriguing and may reflect factors such as pending cases, claims of innocence, or reluctance to disclose. Additionally, this discrepancy may be attributed to the lack of insight characteristic of personality disorders, particularly antisocial personality disorder and narcissistic personality disorder. It has implications for the study, as participants' perceptions of their guilt or innocence might influence their responses to questions about antisocial traits or narcissistic traits. Moreover, this finding underscores the complexity of studying psychological factors in a prison population and the need to consider the potential impact of self-perception and legal status on the research outcomes.

The distribution of crimes among the inmates paints a complex and concerning picture of criminal behavior. Sexual offenses dominate the landscape, accounting for a staggering 46.40% of cases, including serious crimes like defilement, rape and sexual assault. This high prevalence of sexual crimes raises critical questions about the psychological profiles of these offenders, particularly in relation to antisocial personality traits and narcissistic traits. Violent crimes follow at 16.90%, encompassing severe acts such as murder and grievous harm, further highlighting the presence of individuals with potentially significant antisocial tendencies. Robbery (11.80%) and drug-related offenses (4.60%) also feature prominently, suggesting a mix of crimes driven by both violence and substance abuse issues. The lower rates of theft

(3.00%) and other miscellaneous crimes (2.10%) provide a more rounded picture of the criminal activities represented in the prison population. 9.70% of inmates fall into the no crime/not specified category. This group might include those maintaining innocence, awaiting trial, or perhaps those unwilling to disclose their offenses. The findings are expected to be valuable in comparing psychological profiles across different offense categories to better understand the interplay between specific criminal behaviors and underlying personality traits.

The data on sentence lengths reveals a wide range, with 21.9% serving 11-20 years, 11% serving 21-30 years, and 8% serving life sentences. Notably, 49.8% of participants did not specify their sentence length, which is a limitation in the data. The variety in sentence lengths may reflect the diversity of crimes committed and their severity. Longer sentences, particularly life sentences, may have profound effects on inmates' psychological states, potentially influencing the expression of antisocial traits or narcissistic traits over time. The high proportion of unspecified sentences is concerning and may indicate reluctance to disclose, uncertainty about sentences, or data collection issues.

Regarding time served, the majority of those who responded had served 5 years or less, with 17.7% having served 1-2 years and 17.3% having served 3-5 years. However, a significant 39.7% did not specify their time served, which again presents a limitation in the data. The relatively short time served by many participants suggests that the study may be capturing individuals at earlier stages of their incarceration. This could have implications for the manifestation of antisocial traits and narcissistic traits, as these may evolve over the course of long-term imprisonment. The high proportion of unspecified responses is a significant limitation, potentially skewing the understanding of how time served relates to the study's key variables.

The study also gathered data on participants' relationships with their caregivers. A majority reported good relationships with their mothers (82.7%) and fathers (62.4%), though the percentage was notably lower for fathers. There were also higher rates of reported bad relationships and absent/deceased fathers compared to mothers. This data on caregiver relationships provides crucial context for examining the relationships' potential influence on antisocial personality traits. The generally positive relationships reported, especially with mothers, may seem at odds with the prevalence of antisocial behaviors in this population. The lower rates of positive relationships with fathers and higher rates of paternal absence could be significant, as father-child relationships play a crucial role in social and emotional development.

Lastly, the study gathered data on relationships with primary caregivers other than parents. A significant majority (76.4%) of participants did not specify or provided unclear responses regarding these relationships, which presents a substantial limitation in the data. Among those who did respond, 21.1% reported good relationships with their non-parental caregivers, while only 1.7% reported bad relationships. A small fraction (0.8%) reported having no caregiver at all. While the high rate of non-responses limits its utility, the information from those who did respond offers insights into the diversity of caregiving experiences among the inmates, potentially influencing their subsequent behavioral outcomes. The high percentage of unspecified or unclear responses could indicate various factors, such as reluctance to discuss non-parental caregivers, or simply that most participants were raised by their parents. The predominance of good relationships among those who did respond aligns with the trend seen in parental relationships. Table 2a presents the prevalence rates of antisocial personality disorder among the 237 inmates in the study sample.

**Table 2a** Prevalence of ASPD and NPD

Condition	Yes (%)	No (%)
Antisocial	36.3	63.7
Narcissistic	68.8	31.2

The study found that 36.3% of inmates met the criteria for ASPD, while 63.7% did not meet the diagnostic criteria. This implies that approximately one-third of the prison population exhibits antisocial personality traits characterized by persistent disregard for others' rights and violation of social norms. The study results indicate a prevalence rate that is notably lower than other findings, where ASPD prevalence in prison populations typically ranges from 40% to 70%. These findings are corroborated by several studies that consistently report higher ASPD prevalence rates. Fazel and Danesh [10] found ASPD prevalence rates of 62% in their comprehensive meta-analysis of United States prison populations. Similarly, Butler et al. [7] reported 56% prevalence among Australian inmates, while Howard and Duggan [13] found 55% among male offenders in the UK. Marco et al. [15] documented 41% prevalence in Spanish prisons. Within African contexts, Naidoo and Mkize [17] reported 46.1% in South African prisons, and Agbahowe et al. [1] found

47% in Nigerian facilities. However, Seid et al. [19] reported a lower rate of 13% in Ethiopian prisons, which is closer to our Kenyan findings.

Moreover, the study found that 68.8% of inmates met the criteria for NPD, while only 31.2% did not meet the diagnostic criteria. This implies that more than two-thirds of the prison population exhibits narcissistic personality traits characterized by grandiosity, need for admiration, and lack of empathy. The study results reveal a high prevalence rate that substantially exceeds previously reported findings. These findings contrast sharply with existing literature on NPD prevalence in prison populations. Blackburn and Coid [5] reported the highest previous rate of 55% among UK violent offenders, while Sabareanuss and Gonta [18] found 35% in Romanian maximum-security prisons. Dunsieith et al. [8] documented 24.8% among sexual offenders in the USA, and Florez et al. [11] reported 21.08% in Spanish prisons. The 68.8% prevalence in our Kenyan sample represents a substantial increase over these international rates, suggesting unique factors operating within the Kenyan context that may predispose individuals to narcissistic personality organization.

**Table 2b** Comorbidities

	Yes (%)	No (%)
ASPD + NPD	17.9	82.1

The study found that 17.9% of inmates met criteria for both ASPD and NPD simultaneously, while 82.1% did not present with this dual diagnosis. This comorbidity rate indicates that nearly one in five inmates in the Kenyan prison sample exhibits characteristics of both personality disorders concurrently. Given that NPD was found in 68.8% of inmates and ASPD in 36.3% of the population, the 17.9% overlap suggests a substantial intersection between these two conditions within this correctional setting. This dual presentation represents individuals who display both the persistent disregard for others' rights and violation of social norms characteristic of ASPD, alongside the grandiosity, need for admiration, and lack of empathy that define NPD.

The 17.9% comorbidity rate has significant clinical and correctional implications, as these inmates likely represent the most psychologically complex and challenging cases within the prison system. The co-occurrence of both disorders suggests a compounded pathology where antisocial behaviors are amplified by narcissistic entitlement and grandiosity, potentially resulting in more severe and persistent behavioral problems. This dual-diagnosis population would require specialized treatment approaches that address the overlapping features of both conditions, as traditional interventions designed for single personality disorders may prove insufficient. The relatively high comorbidity rate also supports the authors' suggestion that these personality disorders may exist on a spectrum of severe personality pathology rather than as entirely discrete diagnostic entities. The study examined whether the observed comorbidity rate of ASPD and NPD (17.9%) was statistically significant when compared to the individual prevalence rates of each disorder in the Kenyan prison population. A chi-square test of independence was conducted to determine if the dual diagnosis occurrence differed significantly from the standalone rates of ASPD (36.3%) and NPD (68.8%). Table 3 presents Chi-Square Test of Independence results for these comparisons.

**Table 3** Chi-Square Test of Independence

Variable	Categories	$\chi^2$ Value	df	p-value
ASPD+NPD verses ASPD	17.9% vs 36.3%	18.45	1	p = 0.018
ASPD+NPD verses NPD	17.9% vs 68.8%	123.67	1	p = 0.002

The analysis examined whether the ASPD+NPD comorbidity is statistically significant when compared to individuals with either ASPD or NPD. The chi-square test results confirm that inmates with dual diagnosis differ significantly from those with single disorders. When comparing ASPD+NPD versus ASPD alone, the chi-square value of 18.45 with a p-value of 0.018 demonstrates a statistically significant difference, indicating that individuals with both disorders represent a distinct group from those with antisocial personality disorder only. Similarly, the comparison between ASPD+NPD versus NPD alone yielded a chi-square value of 123.67 with a p-value of 0.002, showing an even stronger statistical significance and confirming that inmates with dual diagnosis are significantly different from those with narcissistic personality disorder alone. These findings establish that individuals presenting with ASPD+NPD comorbidity constitute a statistically distinct population compared to inmates with either single disorder, suggesting that dual diagnosis represents a unique clinical presentation rather than a random co-occurrence of the two conditions

in this prison setting. Table 4 presents the distribution of crime categories committed by the inmates in the study sample.

**Table 4** Crime Distribution

Crime Category	Description	Frequency	Percent
Sexual Offenses	Defilement, Rape, Attempted Rape, Sexual Assault, Incest, Sodomy	110	46.40%
Violent Crimes	Murder, Manslaughter, Attempted Murder, Assault, Grievous Harm	40	16.90%
Robbery	Robbery, Robbery with Violence, Armed Robbery	28	11.80%
Drug-related Offenses	Trafficking, Possession of Narcotics	11	4.60%
Theft	Stealing, Breaking and Stealing	7	3.00%
Other	Child Neglect, Land Dispute, Obtaining Money by False Pretense, Threatening to Kill	5	2.10%
No Crime/Not Specified	No Crime	23	9.70%

The study found that sexual offenses were the predominant crime category, accounting for 110 cases (46.40%) of the total sample. This implies that nearly half of the prison population was incarcerated for crimes involving sexual exploitation and violation of others' autonomy. The study results reveal a crime distribution pattern that differs substantially from typical international prison populations. These findings are supported by existing research on sexual offending and personality disorders. Marshall [16] documented significant prevalence of personality disorders, including NPD, among sex offender populations. Dunsie et al. [8] found that 24.8% of sexual offenders met criteria for NPD, supporting the connection between narcissistic traits and sexual crimes. However, the 46.40% prevalence of sexual offenses in our sample exceeds typical international prison populations, where violent crimes and property offenses usually predominate. The study results showed that violent crimes constituted 16.90% of cases, robbery offenses 11.80%, and drug-related offenses 4.60%. These proportions differ from international patterns documented by Butler et al. [7] in Australian prisons and Howard and Duggan [12] in UK facilities, where violent crimes typically represent larger proportions of prison populations. Table 5 presents the statistical analysis examining the association between antisocial personality disorder diagnosis and crime distribution patterns.

**Table 5** Association between ASPD and Crime Distribution

	Value	Significance (p-value)
Pearson Chi-Square	15.365a	0.018
Likelihood Ratio	17.724	0.007
N of Valid Cases	237	

The study found a statistically significant association between ASPD and crime types, with a Pearson Chi-Square value of 15.365 ( $p = 0.018$ ) and Likelihood Ratio of 17.724 ( $p = 0.007$ ). This implies that inmates with ASPD are not randomly distributed across crime categories but show distinct patterns of criminal behavior related to their personality pathology. These findings are corroborated by extensive research linking ASPD to specific crime patterns. Black [4] documented that individuals with ASPD have a 90% likelihood of committing at least one offense leading to arrest. Hodgins and Müller-Isberner [12] found that ASPD is associated with a three to five-fold increase in risk of violent offending. The study results support theoretical expectations about the relationship between antisocial traits and criminal behavior, particularly crimes involving direct harm to others and violations of social norms. Table 6 presents the statistical analysis examining the relationship between narcissistic personality disorder diagnosis and crime distribution patterns.

**Table 6** Association between NPD and Crime Distribution

	Value	Significance (p-value)
Pearson Chi-Square	15.137a	0.019
Likelihood Ratio	15.021	0.020
N of Valid Cases	237	

The study found a statistically significant association between NPD and crime types, with a Pearson Chi-Square value of 15.137 ( $p = 0.019$ ) and Likelihood Ratio of 15.021 ( $p = 0.020$ ). This implies that narcissistic personality traits are associated with criminal behavior. These findings are supported by research documenting connections between narcissistic traits and specific offense patterns. Blickle et al. [6] found that 35% of white-collar criminals met criteria for NPD, supporting the association between narcissistic traits and exploitative behaviors. Esbec and Echeburua [9] documented that narcissists tend to view others as tools for achieving personal objectives, which aligns with crimes involving manipulation and exploitation. The study results corroborate Marshall's [16] findings regarding the prevalence of NPD among sexual offender populations, supporting the connection between narcissistic entitlement and sexual crimes.

#### 4. Discussion

The study revealed that NPD was more prevalent than ASPD in this Kenyan prison sample, with findings that challenge conventional understanding of personality disorder distribution in correctional settings. The prevalence of NPD at 68.8% in the Kenyan sample significantly exceeds rates reported in studies, while the ASPD prevalence of 36.3% falls below international averages, except for the case of Ethiopia where the situation is the same as Kenya. This makes a strong case for investigation as to whether the findings are an East African phenomenon as Nigeria and South Africa presented similar findings to the West [1]; [17]. The crime distribution pattern showed sexual offenses as the predominant category, accounting for 46.40% of cases, followed by violent crimes (16.90%) and robbery (11.80%).

Statistical analysis revealed significant associations between both personality disorders and crime distribution, with ASPD showing a Pearson Chi-Square value of 15.365 ( $p = 0.018$ ) and NPD demonstrating a value of 15.137 ( $p = 0.019$ ).

The analysis examined whether the ASPD+NPD comorbidity is statistically significant when compared to individuals with either ASPD or NPD. The chi-square test results confirm that inmates with dual diagnosis differ significantly from those with single disorders. When comparing ASPD+NPD versus ASPD alone, the chi-square value of 18.45 with a p-value of 0.018 demonstrates a statistically significant difference, indicating that individuals with both disorders represent a distinct group from those with antisocial personality disorder only. Similarly, the comparison between ASPD+NPD versus NPD alone yielded a chi-square value of 123.67 with a p-value of 0.002, showing an even stronger statistical significance and confirming that inmates with dual diagnosis are significantly different from those with narcissistic personality disorder alone. These findings establish that individuals presenting with ASPD+NPD comorbidity constitute a statistically distinct population compared to inmates with either single disorder, suggesting that dual diagnosis represents a unique clinical presentation rather than a random co-occurrence of the two conditions in this prison setting.

The substantial overlap in comorbidities between both disorders, particularly the high prevalence of mood disorders and Cluster B personality traits, suggests that these conditions may exist on a spectrum of severe personality pathology rather than as discrete diagnostic entities. This dual-diagnosis population requires the most intensive and comprehensive treatment interventions, as they present with multiple interconnected psychological vulnerabilities that compound their risk for institutional misconduct and recidivism.

The research on NPD prevalence in prison populations corroborates the significance of the findings while highlighting their exceptional nature. Previous studies have found NPD prevalence rates of 55% in the UK [5], 35% in Romania [18], 24.8% in the USA among sexual offenders [8], and 21.08% in Spain [11]. The 68.8% prevalence in this current study represents a substantial increase over these international rates, suggesting unique factors operating within the Kenyan context that may predispose individuals to narcissistic personality organization. Studies documenting connections between narcissistic traits and sexual offending support our crime pattern findings, with Marshall [16] finding NPD in different samples of sex offenders and Esbec and Echeburua [9] documenting that narcissists tend to view others as tools for achieving personal objectives.

The ASPD prevalence findings have a mixed alignment with the literature, suggesting a potential cultural or methodological variation in diagnosis. This study's finding of a 36.3% prevalence rate falls below typical international ranges of 40-70%, but finds support in certain African contexts, namely, Nigeria [15] and South Africa [17]. Only Seid et al. [19] reported a lower rate of 13% in Ethiopian prisons, which is closer to our Kenyan findings, indicating a need to explore the East African position.

The statistically significant associations between both personality disorders and crime distribution are supported by empirical research. Black [4] documented that individual with ASPD have a 90% likelihood of committing at least one offense leading to arrest, while Hodgins and Müller-Isberner [12] found that ASPD is associated with a three to five-fold increase in risk of violent offending. This study has found the same. Blickle et al. [6] found that 35% of white-collar criminals met criteria for NPD, supporting the association between narcissistic traits and exploitative behaviors. However, this current study has found otherwise. The finding that predominantly sexual offenses rather than the fraud and embezzlement typically associated with NPD in international studies suggests that the expression of narcissism in criminal behavior may have distinctive features in the Kenyan context, potentially reflecting cultural factors, legal definitions, or reporting practices specific to the Kenyan justice system.

It is outside the scope of this study to suggest models of help for these serious personality pathologies. Since studies have correlated these two personality disorders to crime, it begs the question as to whether incarceration with the intention to punish is the best way to deal with these individuals, who naturally gravitate to crime and yet lack empathy for their victims. With no insight as to their motivation, the question arises as to whether correctional facilities can rid the society of crimes, or should there not be other ways of dealing with criminal behavior. In effect, is jail the most effective way of curbing all criminal behavior?

#### **4.1. Recommendations for Further Research**

The distinctive pattern of higher NPD prevalence in Kenyan prisons compared to other studies warrants further investigation. Future research should explore cultural factors that influence the development and expression of NPD in the Kenyan context, including relationships between traditional values, changing social structures, and narcissistic traits. Researchers should examine the validity and reliability of personality disorder assessment tools in the Kenyan population, addressing potential cultural biases in diagnosis that may contribute to the observed differences in prevalence rates.

Additional studies should investigate the relationship between specific subtypes of narcissism and different categories of criminal behavior in diverse cultural contexts, particularly given the predominance of sexual offenses in our sample. Research should focus on understanding why sexual crimes, rather than the fraud and white-collar offenses typically associated with NPD internationally, emerge as the primary criminal expression of narcissistic traits in the Kenyan context. Studies should also examine the extensive comorbidity patterns observed among ASPD inmates, investigating how these multiple psychological conditions interact to influence criminal behavior and treatment outcomes.

Research into developmental pathways to NPD in Kenyan populations should be prioritized, particularly examining early childhood experiences, parenting practices, and attachment patterns that may contribute to the exceptionally high prevalence rates observed. Studies should investigate how cultural child-rearing practices, family structures, and social expectations might influence the developmental pathways toward different personality organizations. Longitudinal research should track the development of narcissistic traits from childhood through adolescence to understand critical intervention points.

Cross-cultural comparative studies should be conducted to examine whether the pattern observed in Kenya exists in other East African countries or represents a uniquely Kenyan phenomenon. Research should investigate the role of socioeconomic factors, urbanization, and social change in the development of personality disorders within the Kenyan context. Studies should also examine the relationship between trauma exposure, as evidenced by the high PTSD rates among ASPD inmates, and the development of both personality disorders in this population.

Finally, studies evaluating the effectiveness of culturally-tailored interventions for both NPD and ASPD in Kenyan correctional settings should be undertaken to improve rehabilitation outcomes for this population. Research should develop and test treatment protocols that address the specific comorbidity patterns observed, particularly the high rates of anxiety, paranoid traits, and substance use disorders. Studies should also investigate the feasibility of implementing trauma-informed care approaches given the significant PTSD prevalence among ASPD inmates. These research directions will expand knowledge about the psychological profile of prison populations in Kenya and guide the development of more effective rehabilitation strategies tailored to the specific needs of this population.

---

## Compliance with ethical standards

### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

---

## References

- [1] Agbahowe, S. A., Ohaeri, J. U., Ogunlesi, A. O., & Osahon, R. (1998). Prevalence of psychiatric morbidity among convicted inmates in a Nigerian prison community. *East African Medical Journal*, 75(1), 19-26.
- [2] American Psychiatric Association (APA) (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text revision). Washington, DC: American Psychiatric Publishing.
- [3] Aroyo, K., & Ortega, J. (2009). Personality disorders in prison inmates: An international perspective. *Journal of Offender Rehabilitation*, 48(4), 287-295.
- [4] Black, D. W. (2015). The natural history of antisocial personality disorder. *The Canadian Journal of Psychiatry*, 60(7), 309-314.
- [5] Blackburn, R., & Coid, J. W. (1999). Empirical clusters of DSM-III personality disorders in violent offenders. *Journal of Personality Disorders*, 13(1), 18-34.
- [6] Blickle, G., Schlegel, A., Fassbender, P., & Klein, U. (2006). Some personality correlates of business white-collar crime. *Applied Psychology*, 55(2), 220-233.
- [7] Butler, T., Andrews, G., Allnut, S., Sakashita, C., Smith, N. E., & Basson, J. (2006). Mental disorders in Australian prisoners: A comparison with a community sample. *Australian and New Zealand Journal of Psychiatry*, 40(3), 272-276.
- [8] Dunsieith, N. W., Nelson, E. B., Brusman-Lovins, L. A., Holcomb, J. L., Beckman, D., Welge, J. A., & McElroy, S. L. (2004). Psychiatric and legal features of 113 men convicted of sexual offenses. *Journal of Clinical Psychiatry*, 65(3), 293-300.
- [9] Esbec, E., & Echeburua, E. (2010). Violence and personality disorders: Clinical and forensic implications. *Actas Españolas de Psiquiatría*, 38(5), 249-261.
- [10] Fazel, S., & Danesh, J. (2002). Serious mental disorder in 23,000 prisoners: A systematic review of 62 surveys. *The Lancet*, 359(9306), 545-550.
- [11] Florez, G., Casas, A., Kreis, M. K. F., Forti, L., Martinez, J., Fernandez, J., Conde, M., Vazquez-Noguerol, R., Blanco, T., Hoff, H. A., & Cooke, D. J. (2019). A prototypicality validation of the Comprehensive Assessment of Psychopathic Personality (CAPP) model Spanish version. *Journal of Personality Disorders*, 33(2), 174-197.
- [12] Hodgins, S., & Müller-Isberner, R. (2000). *Violence, crime and mentally disordered offenders: Concepts and methods for effective treatment and prevention*. Chichester, UK: John Wiley & Sons.
- [13] Howard, R., & Duggan, C. (2010). Personality disorders: Their relation to offending. In J. M. Brown & E. A. Campbell (Eds.), *The Cambridge Handbook of Forensic Psychology* (pp. 282-291). Cambridge University Press.
- [14] Krueger, R. F., Markon, K. E., Patrick, C. J., Benning, S. D., & Kramer, M. D. (2005). Externalizing psychopathology in adulthood: A dimensional-spectrum conceptualization and its implications for DSM-V. *Journal of Abnormal Psychology*, 114(4), 537-550.
- [15] Marco, J. H. (2015). Psychopathology in prison inmates: Prevalence and predictors. *Journal of Forensic Psychology*, 30(2), 93-100.
- [16] Marshall, W. L. (2007). Diagnostic issues, multiple paraphilias, and comorbid disorders in sexual offenders: Their incidence and treatment. *Aggression and Violent Behavior*, 12(1), 16-35.
- [17] Naidoo, S., & Mkize, D. L. (2012). Prevalence of mental disorders in a prison population in Durban, South Africa. *African Journal of Psychiatry*, 15(1), 30-35.

- [18] Sabareanuss, A., & Gonta, V. (2023). Personality pathology in a Romanian maximum-security prison: Implications for rehabilitation. *European Psychiatry*, 38(4), 198-212.
- [19] Seid, M., Hussen, T., & Ebrahim, J. (2021). Antisocial personality disorder and associated factors among incarcerated in prison in Dessie city correctional center, Dessie, Ethiopia: A cross-sectional study. *BMC Psychiatry*, 21(1), 1-9.
- [20] Seldom, M., Flens, J., Gould, J., Ramnath, R., Tringone, R., & Grossman, S. (2022). The Millon Clinical Multiaxial Inventory-IV (MCMI-IV) and Millon Adolescent Clinical Inventory-II (MACI-II) in legal settings. *Journal of Personality Assessment*, 104(2), 203–220. <https://doi.org/10.1080/00223891.2021.2013248>
- [21] Stinson, F. S., Dawson, D. A., Goldstein, R. B., Chou, S. P., Huang, B., Smith, S. M., & Grant, B. F. (2008). Prevalence, correlates, disability, and comorbidity of DSM-IV narcissistic personality disorder: Results from the wave 2 national epidemiologic survey on alcohol and related conditions. *Journal of Clinical Psychiatry*, 69(7), 1033-1045.
- [22] Yousef, F., & Talib, M. A. (2021). Personality disorders among inmates: A comparative study across three Middle Eastern countries. *International Journal of Offender Therapy and Comparative Criminology*, 65(5), 101642.