

# Drug and Substance Abuse in Relation to Behavioral Disorders Among Adolescents in Shikusa Borstal Institution, Kakamega, Kenya

## Abstract

The prevalence of global conduct disorder (CD) among juvenile offenders' ranges from 2 to 10%, making it a significant problem. This highlights the largest health and social issue facing the world's nations. Over 60% of inmates at Borstal institutions exhibit various forms of delinquency, and the estimated rate of CD in Kenya is 31.4%. This study sought to investigate the influence of drug and substance abuse on conduct disorder among the young offenders. The study incorporated Albert Bandura's Social Learning Theory and Sigmund Freud's Psychoanalytic Theory. Shikusa Borstal Institution was the study area. The study used descriptive research design. There were 250 target population. 68 juvenile offenders were chosen as the sample size using basic random and census sampling techniques. A modified CDS questionnaire and interview guide aimed at FGDS participants and key informants were used to collect primary data. Descriptive accounts were supplied verbatim and as narratives and STATA software version 15 (SSP) was used to analyze all of the raw data gathered for this investigation. The information was calculated and displayed as frequencies along with the corresponding percentages. Because they were skewed, continuous variables, such as age and grade, were displayed as medians and interquartile range (IQR). Descriptive and inferential statistical methods were used to analyze quantitative data, and tables and figures were used to display the findings. The study's findings, the majority of participants (68.3%) were first-time offenders, they hardly ever shown symptoms of a serious conduct issue. However, there was a substantial, positive, and significant ( $p < 0.05$ ) association between CD and familial variables ( $r = 0.797$ ), drug and substance misuse ( $r = 0.906$ ), ADHD ( $r = 0.895$ ) among juvenile offenders, the results also showed that conduct disorder was positively and statistically significantly impacted by the independent variables that were utilized in the study, including drugs and substance misuse. The study recommends that in order to help young people modify their social conduct, the government and other policymakers should develop strategies and policies to counsel and advise juvenile offenders to behave well. Parents should receive training on how to recognize the symptoms of comorbid psychiatric disorders.

**Keywords:** Conduct disorder, social issue, substance abuse, juvenile offenders,

## Introduction

Today's youth suffer from Conduct Disorder (CD), a severe and worldwide problem that contributes to criminal activity and actions that endanger the aspirations and futures of young people (Omwenga & Mwangi, 2024). In recent years, this problem has grown at a startling rate. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V) published by the American Psychological Association (APA) defines conduct disorder (CD) as a pattern of regularly and persistently violating the fundamental rights of others and/or important age-appropriate social norms and standards. Examples of this include delinquency/truancy, property destruction, dishonesty/theft, and aggressive behavior against people and animals. Additionally, the DSM-V defines behavior disorder (Omwenga & Mwangi, 2024). The American Psychological Association (2012) states that depending on how severe the symptoms are, a conduct disorder can be categorized as mild, moderate, or severe. This standard shows how to recognize a conduct

disorder. In addition to intimidating, bullying, or threatening people, it frequently results in violent altercations (Okwara, 2013).

According to the American Psychological Association (2013), adolescents face several challenges, such as parental crime, large families, inadequate supervision, suboptimal parenting techniques, and the employment of harsh disciplinary measures. These are all signs of CD in their families. These results are in line with those of Frick (2012), who claimed that a rise in delinquency among young people with up to three-quarters and one or more psychiatric disorders suggests that by integrating justice, mental health, and child welfare in Borstal institutions, mental health policies need to be revised to help young offenders break the cycle of recidivism.

The most recent results were released in the *Criminal Justice and Behavior* journal. The idea that CD is becoming more common worldwide, especially among men, and that it takes up a significant portion of funds allocated to mental health, juvenile justice, and education is supported by this argument (Keari et al., 2024).

A corrective juvenile judicial system handles juvenile criminal offenses, particularly for youngsters between the ages of 6 and 7, according to Okutoyi (2015). In order to rehabilitate and reintegrate juveniles into society, the system focuses on legal issues surrounding them. Facilitating the rehabilitation of young people who have committed crimes before their reintroduction into society is the goal of the juvenile justice department. According to Zelechowski, Sharma, Beserra, Miguel, DeMarco, & Spinazzola (2013), a large number of research do not concentrate on a variety of mental health issues that are thought to be precursors to hullabaloo, such as future personality disorders and childhood self-harm.

Many research conducted in the modern era have found that children with psychiatric issues who are incarcerated have a significant prevalence of CD (DeLisi et al., 2011; Choi et al., 2017). Between 40% and 90% of juvenile offenders have CD, according to Borschmann et al. (2020). Livanou et al. (2019) found in a similar study that the prevalence rate is highest among young females. Collins et al. (2010) found that at least one psychiatric disorder was present in 69.9% of male juveniles in Borstal institutions. These conditions include substance abuse, behavioral disorders, and attention deficit hyperactivity disorder (ADHD). According to Young et al. (2015), the prevalence of ADHD in juvenile offenders is three to five times higher than in the general population. This is troubling because it negatively affects behavioral disorders, which can lead to problems with reintegration and recidivism (Philipp-Wiegmann et al., 2018). These demographic needs specialized care because of comorbidity or pre-existing psychiatric issues (Nisar et al., 2015). Many mental illnesses are more common in adolescents than in adults. It's possible that many children with conduct disorders were raised to act in an antisocial manner and ruin their lives. It has been noted that the prevalence of conduct disorder has grown in developing nations, placing a financial burden on people, healthcare systems, social service providers, and all facets of society, including the family, schools, police, and criminal justice system (Borschmann et al. 2020).

Juveniles with conduct disorders thus struggle to manage their emotions and behaviors, which severely disrupts their lives. The importance of this assumption in the study is explained by the

fact that, in comparison to children without conduct disorders, 3.2% of male children whose conduct disorder started at a young age had anxiety disorders, 7.8% drink alcohol, and 2.7% commit crimes (Frick, 2012). This reverses the effects of attention deficit hyperactivity disorder, which is associated with psychopathic traits and a high likelihood of antisocial conduct in adolescence. 15% to 18% of patients suffer from anxiety disorders, 23% of school-aged children suffer from depression, and 35% of youngsters have conduct difficulties, Kim (2017).

Globally, between 2% to 10% of young people worldwide suffer from conduct disorder, with Kenya reporting a prevalence rate of 31.4%. The number of juvenile offenders behind bars has risen by over 60% from 6,318 in 2008 to 13,108 per 100,000 young offenders in 2010, according to statistics data (Griffin et al., 2011). According to these sources, conduct disorder is a serious social and health issue that has been thoroughly studied (Coghill, 2021). Coker et al. (2014) investigated the relationship between self-reported criminal activity and psychiatric disorders in a sample representative of the United States. The study found that young people with ADHD and comorbid conduct disorder had significantly higher crime rates than those without these conditions. Numerous studies have demonstrated that children with ADHD are more likely to engage in criminal activity, according to the findings of Fletcher and Wang (2017). In contrast, Sibly et al. (2011) conducted a large study in children with ADHD to investigate the risk for conduct disorder and a variety of other long-term negative outcomes, such as criminal activity. Similarly, studies have shown that integrated therapy is a successful approach for co-occurring disorders such as ADHD and anxiety, as well as ADHD and substance use issues (Coghill et al., 2021). There is sufficient evidence to suggest that ADHD increases the likelihood of oppositional defiant disorder as a precursor to conduct disorder, which in turn increases the risk of early-onset conduct disorder (Burke et al., 2014).

Numerous studies indicate that between 5.4% and 8.7% of African school-age children suffer from ADHD. Patients with ADHD frequently have CD, and having both conditions is regarded as a step toward comorbidity (Bakari 2017; Adewuya 2017). Children who experience abuse, rejection, or parental indifference are more likely to grow up to be violent, aggressive, and antisocial. Severe childhood trauma increases the danger (Boitt, 2016). The total number of juveniles in Benin who were found guilty of a crime and given prison sentences increased by 250% between 2005 and 2009, from 64 to 154 (Wacheke, 2018). The circumstances of their families and social lives, as well as the conditions of their settings, may have an impact on the increasing number of juvenile offenders in our Borstal institutions (Omwenga & Kayusi, 2024).

Serious crimes committed by juvenile criminals in conflict with the law have become more common in Kenya in recent years. This has led to the emergence of organized criminal gangs for children (NPS, Annual crime report, 2018). This might be explained by improved recognition of comorbid psychological problem patterns, successful treatments in Borstal institutions, and decreased focus on and reactivity to familial dysfunctions. 2,401 juvenile criminals were housed at Borstal institutions in 2012. This number rose to 2,767 in 2014. This amounted to an increase of 266 additional cases (Otieno, Kombo, and Bowen, 2017). Additionally, the crime commission

favors men, and Merikangas et al. (2010) argue that a rise in CD among young offenders is the cause of these rises in the number of young offenders in Shikusa Borstal institutions. The risks, predictors, and patterns of co-occurring disorders with conduct disorder in young offenders seem to be poorly studied, despite this increase. Furthermore, research from background studies like Sharp (2015) and Merikangas et al. (2010) clearly shows a high rate of incarceration and recidivism, most likely as a result of the Shikusa Borstal institution's over-reliance on vocational career training, lack of skill-based training, and lack of psychosocial engagements.

Risk factors for juvenile delinquency include vulnerabilities, interpersonal connections, and the environment. Eme (2020) asserts that this prognosis is essential for ensuring future progress and more accurately forecasting violent conduct. For instance, there is evidence linking childhood trauma to a higher likelihood of developing a behavioral issue (Villanueva, Valero-Moreno, Cuervo, & Gascó, 2019). Baglivio et al. (2020) found that while the degree of trauma recurrence regulates this early on, childhood trauma indirectly contributes to the development of psychiatric disorders.

**Objective:** Examine how conduct disorders among young offenders at Shikusa Borstal Institution are impacted by drug and substance usage.

### **Significance of the study**

- i. This study offers significant understanding of the traits of comorbid diseases and how these disorders affect the effects of conduct disorder on many stakeholders. The results helped to clarify the background factors and personal traits underlying the delinquent behavior linked to conduct disorder.
- ii. Future researchers and students would benefit from this study's new literature on earlier interventions through evidence-based awareness of the comorbid psychological patterns of conduct disorder in juvenile offenders.
- iii. Clinicians, educators, and community members can benefit from the study's findings about the moderating effects of family factors on comorbid psychological disorders and conduct disorders. They will be able to comprehend the cause and trend of comorbidity in conduct disorders among young offenders and develop preventative, intervention, and treatment strategies beforehand.
- iv. Professionals in a range of fields, including parents, psychologists, counselors, and others, may also gain more insight into the risk factors and predictors of conduct disorders in adolescents as well as the best ways to prevent disorders associated with behavioral changes for the community at large.
- v. Teachers in a range of correctional facilities will also find value in the study's conclusions. It will increase their understanding of how to reprimand juvenile offenders and provide an example for them.
- vi. Both the federal government and local governments gain from this research. If they take this into consideration, they will be able to enact laws that will encourage moral behavior

in society, give people the comforts they need, and impose the appropriate penalties for breaking the law.

### Methodology

The study used a descriptive research design, which included both qualitative and quantitative aspects of the research.

#### Sample size:

The following formula was used to determine the necessary sample size: (CDCEP, 2019; Hosmer & Lemeshow, 1990).

$$S = Z^2 P (1-P) / D^2$$

S= Sample size required at 95% confidence level

P= Prevalence of factor (Self-referrals to the institution, in this case, 5%); (Cortina, Sodha, Fazel & Ramchandani, 1990).

D= Allowance error (3%)

### Target Population

The study target population was 250, which consisted of 225 juvenile offenders aged between 13 and 17 years old, 5 administrators, 12 trainers (Wardens, mechanics, electrical, carpentry, teachers), and 8 Welfare officers/counselors from this study center as indicated in *table 1*.

Group	Population
Administrators– (Superintendent, Deputy Super-intendant, Records officer, Dining officer, and Librarian)	5
Juvenile offenders (13-17yrs)	225
Trainers	12
Welfare officers/Counselors	8

**Table 1:** Target population

**Source:** *Shikusa Borstal institution (2020)*

#### Sampling method:

The study utilized both a simple random sampling and a census sampling approach (Kombo & Tromp, 2006). 225 juvenile offenders made up the unit of analysis out of the total number of juvenile delinquents. For the purpose of the research, 68 juvenile delinquents were chosen at random from the pool of 225 available in order to participate.

<b>Group</b>	<b>Population</b>	<b>Sampling determination procedure</b>	<b>Sample size</b>
Administrators	5	Census	5
Juvenile offenders (13-17yrs)	225	30% (Mugenda Formula) and, CDS	68
Trainers	12	Purposive	12
Welfare officers/Counselors	8	Census	8

*Table 2: Sample Size*

*Source: Researcher (2020)*

#### **Instruments/ Questionnaire:**

- i. The researcher designed a questionnaire consisting of closed-ended questions for the questionnaire. A demographic questionnaire was developed by the researcher in order to ascertain the respondent's personal history and background information. The questionnaire inquired about the respondent's age as well as their educational standing within the Borstal facility. For the purposes of this investigation, the questionnaires focused on juvenile offenders.
- ii. Verbal interviews that were conducted with the respondents in order to gather source information that would assist the researcher in corroborating the findings obtained from the questionnaires. The purpose of the interviews was to identify and obtain the participants' expertise on and views regarding the comorbid psychological disorders and, their influence on conduct disorder among young offenders at the Shikusa Borstal institution in Kakamega County, Kenya. The interviews were of a semi-structured format, which allowed both the interviewer and the interviewee to focus on the questions that were important to the study's objectives while still allowing the interviewee and interviewer to ask follow-up questions about the responses they had received.
- iii. One focus group discussion was carried out for the purpose of this study, and seven participants were recruited from a variety of industries. The knowledge that they were thought to have on issues concerning comorbid psychological disorders and how they can influence conduct disorder in juvenile offenders was used to assemble them in the appropriate order.

## **Validity and Reliability of the Research Instruments**

Content validity was applied during the pilot study to validate the questionnaires used in this investigation. Tests were administered in institutions not included in the sample, and similar groups were assessed using the test-retest procedure to guarantee that there was no possibility of error. The split halves technique was used to evaluate the reliability of the research instruments. The items were divided into two parts, and each half was scored separately. The reliability coefficient was then accepted after the two items matched in terms of content and difficulty using the person's product moment formula.

## **Data Collection**

First, the data collecting introduction letter was acquired from Kisii University's post-graduate studies school and the National Commission for Science, Technology, and Innovation (NACOSTI) granted a research letter and a permission to conduct the study.

Since Kisii University lacked a recognized body for ethical permits, the researcher obtained an ethical permit from Baraton University of East Africa. The Nairobi headquarters of the Department of Prisons granted the researcher authorization to conduct study in the chosen Borstal institutions using the papers.

The researcher obtained authorization from the management to gather data for this study and arranged to visit the Shimo la Tewa Borstal institution in Mombasa County for piloting. Later, the researcher visited the Shikusa Borstal institution as the study site for familiarization. The researcher made plans to visit both colleges after obtaining the required authorization. A questionnaire distributed by the group itself made up the first portion of the survey.

The research questionnaires were translated into the local language, Kiswahili. After translating the Kiswahili questionnaire back into English, a translation consensus was reached.

## **Data Analysis**

STATA software version 15 (SSP) was used to analyze all of the raw data gathered for this investigation. The information was calculated and displayed as frequencies along with the corresponding percentages. Because they were skewed, continuous variables, such as age and grade, were displayed as medians and interquartile range (IQR).

Both descriptive and inferential statistical techniques were applied in the analysis of the collected data. The standard deviation and the mean were both significant in the field of descriptive statistics. Analyses of regression and correlation were common research strategies in inferential statistics. There were textual, tabular, and graphical representations of the data that were studied.

A regression analysis was verifying the nature of the connection that exists between the variables that are considered independent and the variables that are considered dependent. According to Saunders et al. (2009), the t-test was utilized in multiple regressions to determine the probability of the relationship between each of the individual independent variables and the dependent

variable. This was done by determining whether or not there was a significant correlation between the two. The comparison of the two collections of data allowed for the completion of this task.

### **Logistical and Ethical Considerations**

The National Commission for Science, Technology, and Innovation (NACOSTI), the NACADA, and the heads of the institutions all approved the Kisii University Ethics and Review Committee, which granted the researcher an ethical review certificate. The respondents' consent was voluntary, and the researcher obtained it by not writing their names on the instruments. The institution's head asked parents for their consent so that children may take part in the study. Particularly in data collection, participant selection, interpretation, and report writing, integrity and transparency were upheld throughout the study. The participants were asked not to put their identities on the questionnaires, and respondents were kept apart from non-respondents in a segregated setting to protect their safety.

## **Results**

### **Respondents' Response Rate**

There were 63 (92.65%) responses from juvenile offenders, and the surveys were correctly completed and sent back. Five of the questionnaires were filled out incorrectly or with missing information. Because this response rate supports Haerle, (2016), claim that a response rate of 50% or more is enough for data analysis, it was sufficient to analyze the study. According to Creswell, data analysis can be done with a response rate of 50% or more. The trainers, welfare/counselors, and administrators all participated 100% of the time, as shown in *table 3*.

**Table 3: Response Rate**

<b>Target group</b>	<b>Instruments issue</b>	<b>duly filled</b>	<b>Incomplete</b>	<b>Return rate %</b>
Juvenile offenders	68	63	5	92.64
Welfare officers/counsellors	8	8	0	100
Trainers	12	12	0	100
Administrators	5	5	0	100

*Source: Field data, 2021*

### **Respondents' Age**

The study sought to establish the age of the respondents. 83.9% of the juvenile offenders were between the ages of 13 and 17 years old, 10.8% were over the age of 20, and 5.4% were between the ages of 11 and 15 years old. According to the findings of the study, 83.9% of the juvenile delinquents with conduct disorders who were housed at Shikusa Borstal Institution were between the ages of 13 and 17 years old. The results were presented in *table 4*.

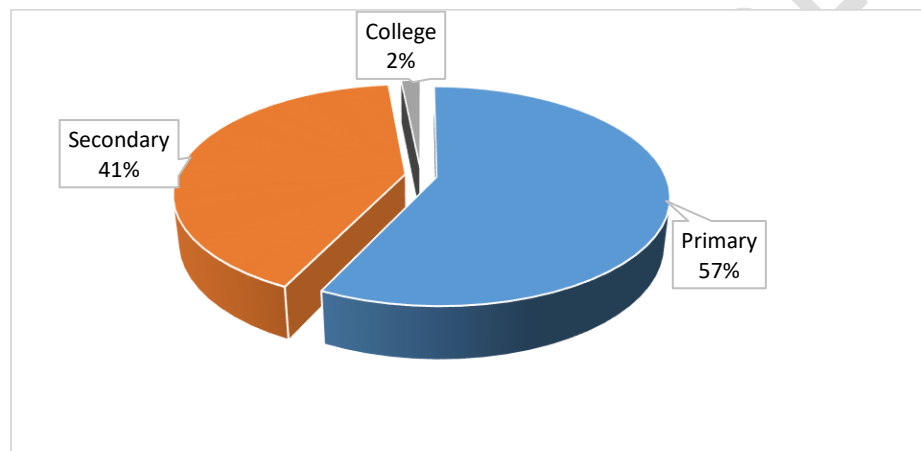
Age (Years)	Frequency	Percent
11-12	5	5.4
13-17	78	83.9
Over 20	10	10.8
<b>Total</b>	<b>93</b>	<b>100.0</b>

**Table 4:** Age of respondents at Shikusa Borstal Institution

**Source:** Field data 2021

### Respondents' Level of Education at Shikusa Borstal Institution

The study sought to find out the juvenile offenders' level of education. 41% of the respondents had finished their secondary school, 2% had finished their elementary education, and 57% of the respondents had finished their primary education. This suggested that CD was more common among juvenile offenders in the Borstal institution than among students in elementary, middle, and high school, respectively. The findings were presented in *figure 1*.

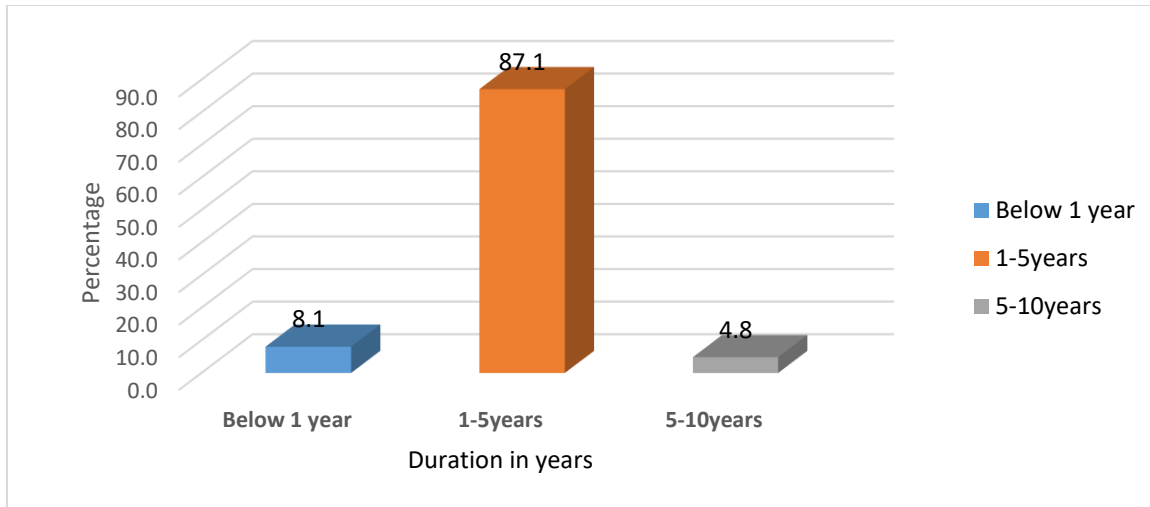


**Figure 1:** The highest level of education attained by the juvenile offenders

**Source:** Field data 2021

### Length of Sentence Among Young Offenders at Borstal Institution

The study sought to find out the length of sentences of the respondents in Shikusa Borstal Institution. shows that 87.1% of the juvenile offenders had sentences that ranged between 1-5 years, 8.1% had sentences that were less than 1 year, and 4.8% had sentences that were between 5-10 years. This suggests that juvenile offenders have a propensity to commit additional offenses that are in violation of the law. The findings were presented in *figure 2*.

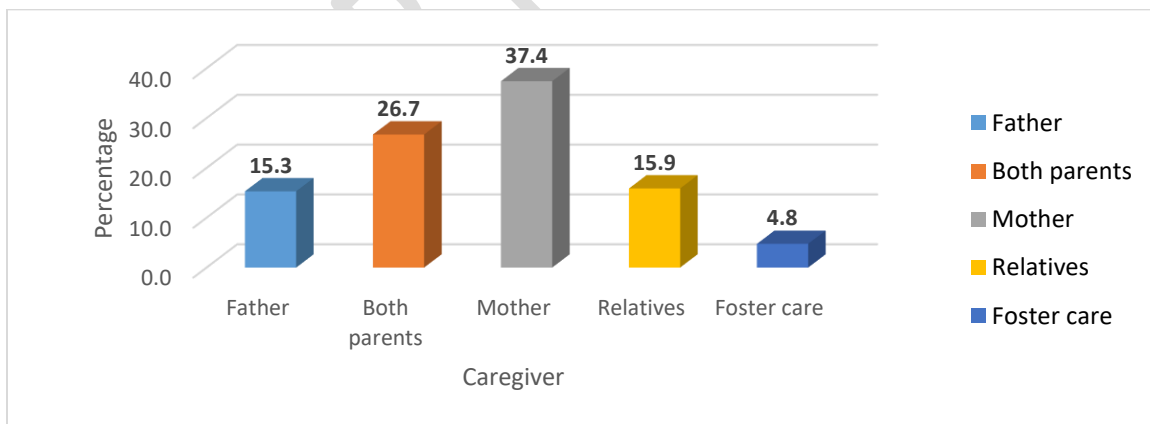


**Figure 1:** Respondents' length of sentence

**Source:** Field 2021

### Parenting of Young Offender at Shikusa Borstal Institution

The goal of the study was to ascertain how the juvenile criminal at the Kakamega Borstal institution was raised. The study found that those juvenile offenders at Shikusa Borstal institution who were brought up by fosters care (4.8%) experienced conduct disorder the least, followed by those who were brought up by relatives (15.9%), then, those who were brought up by their fathers only (15.3%), and finally, those who were brought up by both parents (26.7% of the juvenile offenders) had the second-highest level of conduct disorder at Shikusa Borstal institution. The findings were illustrated in *table 3*

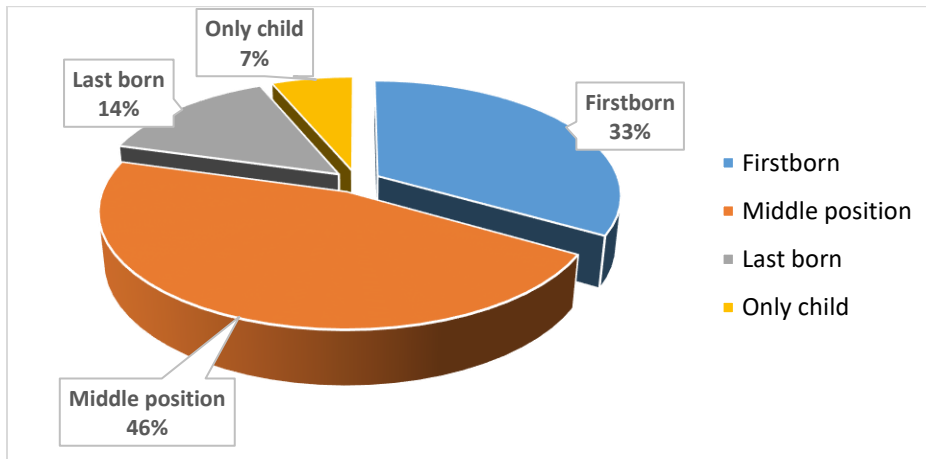


**Figure 2:** Parenting of young offender at Borstal institution

**Source:** Field data 2021

## Family Position of Juvenile Offender and Conduct Disorder

The study sought to find out the position of the young offenders at the Borstal institution in their families about conduct disorder. According to research, the majority of young offenders at Shikusa Borstal Institution were middle-aged (46%), firstborn (33%), lastborn (14%), and only child (7%) in their families. The study's conclusions showed that the juvenile offenders at Shikusa Borstal institution with the greatest degrees of behavior disorder were those who held the middle rank in their families. Lola, Belete, Gebeyehu, Zerihun, Yimer, and Leta (2019) found a strong correlation between ADHD, low family status, and having a birthing order. *Figure 4* presented the outcome.

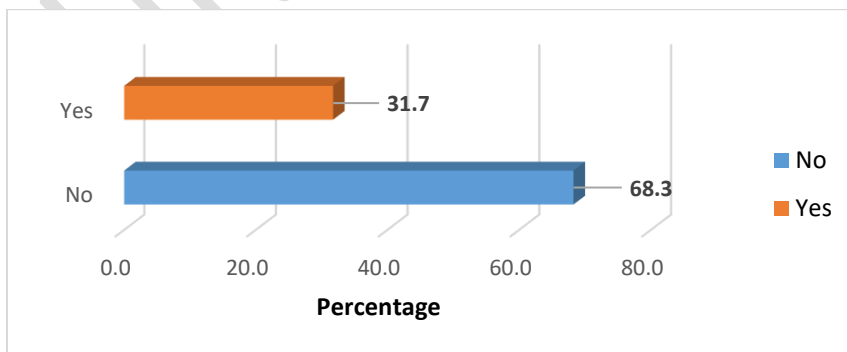


**Figure 4:** Young offenders' position in the family

**Source:** Field data 2021

## Previous History of Detention

The study wanted to determine whether the juvenile offenders had a history of detention. According to the report, 31.7% of the juvenile offenders at Shikusa Borstal's facility had prior incarceration, whereas 68.3% had none at all. As a result, the great majority of young criminals residing at the Shikusa Borstal institution had never been imprisoned for a conduct problem before. Consequently, among other reasons for their incarceration, they were first-time offenders because of behavior problem. *Figure 5* illustrated the results of the study.



**Figure 3: Previous history of detention of young offenders**

**Source: Field data 2021**

**Examine the Influence of Drug and, Substance Abuse and, Conduct Disorder**

The study sought to assess the influence of drug and substance abuse on conduct disorder. the research found that the individuals incarcerated at Shikusa Borstal had a mean level of 2.40 for their desire to use drugs or substances, with a standard deviation of 1.42. Using drugs and substances even when it puts one in danger in the Shikusa Borstal institution had a mean of 2.13 with a standard deviation of 1.314. Neglecting other aspects of life because of drug abuse and substance use had a mean of 2.79 with a standard deviation of 1.370. Taking drugs and, substances in larger amounts or longer than you are meant to in the Shikusa Borstal institution had a mean of 2.22 with a standard deviation of 1.288. These findings were consistent with those found by Hopfer et al. (2013), who discovered that increased use of all substances was linked with increased instances of behavioral disorders among community members.

	n	Mean	Std. Deviation
Craving to use the drugs or substance use.	63	2.40	1.420
Take drugs and substances in larger amounts or longer than you are meant to.	63	2.22	1.288
Using drugs and substances even when it puts one in danger.	63	2.13	1.314
Neglecting other parts of life because of drug abuse and substance use.	63	2.79	1.370

**Table 5: Drug and substance abuse on conduct disorder**

**Source: Field data 2021**

**Association between drugs and substance abuse and conduct disorder**

**At Shikusa Borstal Institution, the hypothesis examined the relationship between drugs, substance misuse, and conduct disorders among young offenders.**

*H0: The conduct disorder of juvenile offenders at Shikusa Bistro facility is not significantly impacted by drugs or substance usage.*

*H1: Substance abuse and drug use have a major impact on the conduct disorder of young offenders at Shikusa Bistro.*

Simple regression between drug use and substance abuse and behavioral disorders in juvenile offenders was used to explore this hypothesis as shown in *table 6*.

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.906 <sup>a</sup>	0.821	0.816	0.444

a. Predictors: (Constant), Drug and substance abuse

**Table 6:** Goodness of fit model for drug and substance abuse on conduct disorder

**Source; Field Data**

The results indicate a link between substance addiction, including drug abuse, and behavior disorders. In the univariate version, the independent variable (drugs and substance misuse) may account for 81.6% of the conduct disorder, according to an adjusted R-Squared of 0.816. In contrast, other factors that are not part of this model can only account for 18.4% of the conduct disorder. This indicates that 81.6% of the conduct disorder may be explained by the independent variable. Drug and other substance misuse and behavior disorder are positively correlated, according to a correlation coefficient of 0.906.

**Table 7:** ANOVA table for drug and substance abuse on conduct disorder

<b>ANOVA</b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	32.393	1	32.393	279.25	.000 <sup>b</sup>
1	Residual	7.081	61	0.116		
	Total	39.474	62			

a. Dependent Variable: Conduct disorder

b. Predictors: (Constant), Drug and substance abuse

**Source; Field Data**

**Regression Coefficients (Drugs and Substance Abuse)**

An analysis of variance (ANOVA) was performed to ascertain whether the regression model is statistically significant overall. The null hypothesis for this test was that the independent variables had no capacity to explain anything ( $1=0$ ). *Table 8* presents the results of the Analysis of Variance (ANOVA) for the regression coefficient. The research revealed that R-squared is considerably higher than zero, as indicated by the p-value of 0.001. Consequently, a significant amount of the variability linked to conduct disorder can be explained by our predictor. The significance of the p-value enables the study to reject the null hypothesis and accept the alternative hypothesis, leading

us to conclude that the predictor has explanatory power (10). Consequently, the regression model's significance may be verified ( $F(1, 62) = 279.25, p 0.001$ ).

**Table 8: Regression coefficients (Drugs and substance abuse)**

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.43	0.248		1.734	0.091
	Drug and substance abuse (DSA)	0.863	0.067	0.906	12.833	0.000

a. Dependent Variable: Conduct disorder

**Source; Field Data**

$X_2$ = Drug and substance abuse (DSA);

$Y$ = Conduct disorder

$$Y = 0.430 + 0.863X_2$$

The results of the linear regression showed that substance misuse and drugs had an impact on conduct disorder. Accordingly, while all other variables remain the same, a unit increase in drug and substance misuse would result in a 0.863-point rise in conduct disorder.

### Discussion and conclusion

According to the study's findings, young offenders had a desire to use drugs or other substances. Because of this, the researchers concluded that the third goal was not achieved (mean score of 2.40). Additionally, the study discovered that the juvenile offenders were abusing drugs and substances in greater amounts or for longer periods of time than is advised (2.22), using drugs and substances even when doing so puts them into danger, and neglecting other facets of their lives as a result of drug and substance abuse (2.79). The relationship between substance and drug misuse and behavioral issues in the Shikusa Borstal institution was strong, positive, and noteworthy.

Drug and substance misuse was found to have a high and positive connection with conduct disorder ( $r=0.906$ ), in a similar way to demographic characteristics. According to this research, the degree of conduct disorder will rise in direct proportion to the level of drug and substance usage. Additionally, there is a strong correlation between substance abuse and conduct disorder; that is, when all other factors are held constant, an increase of one point in drug abuse is linked to an increase of 0.863% points in conduct disorder. The study's conclusions show a strong, positive,

and statistically significant correlation between drug and substance misuse and conduct problems among juvenile offenders.

## Recommendations

- i. In order to counsel and encourage young people to behave in a constructive way, the government and other officials should collaborate to create programs and methods. As a result, there would be fewer juvenile offenders since it would be simpler for young people to alter their social behaviors. This is why, if at all possible, primary prevention or secondary or tertiary prevention, depending on the situation must be achieved through further research, as well as the development and application of reliable strategies that are adapted to the socio-family and environmental context in general. Further study is necessary to accomplish an effective primary prevention, as is the development and application of reliable interventions that are adapted to the broader socio-family and environmental context.
- ii. **To increase awareness of conduct disorder, more extensive media efforts must be started, and parents must be trained in the early detection of the problem.** The study's conclusions suggest that teaching young people to respect and abide by the law should be the main goal of education and training initiatives. This would raise awareness of the problem and reduce the number of people who break the law and end up behind bars.
- iii. **Those young boys who are juvenile offenders should receive complete scholarships for their education from the Ministry of Education, legislators, well-wishers, and donors,** among others. This is due to the fact that some adolescent offenders are the product of delinquent behavior brought on by familial difficulties. This would reduce the number of youths in the Shikusa Borstal institution who resorted to criminal activity due to a lack of funds for their education.
- iv. To adopt an interventional approach that is more successful in addressing problematic children, **there is an urgent need for coordination between the juvenile justice system and mental health treatment providers.**
- v. More measures should be implemented by the appropriate authorities to end youth drug usage. For instance, it should be illegal to sell narcotics in areas that are easily accessible to youth, including those near educational institutions. It's probable that this will make it harder for young criminals to get alcohol and other drugs, which will lead to a decrease in the number of boys at the Shikusa Borstal facility and a reduced rate of consumption among young offenders.
- vi. The government and educational institutions should use tactics like counseling to lower the prevalence of ADHD in youth. This might lessen the amount of disruptive conduct that occurs between them.
- vii. The researchers came to the conclusion that, given the correlation between conduct disorder and older teenagers, prophylactic measures are urgently needed. This is to prevent these youths from committing more serious crimes in the future.

## Further Research

- i. Future research on conduct disorders and associated psychological issues in young offenders would benefit from concentrating specifically on the gender of female inmates in Borstal's. In addition to understanding the moderating influence of familial factors, co-occurrence, and the causes of conduct disorder, it may also make it simpler to determine the severity of conduct disorder and the consequences of having it.
- ii. **The juvenile justice system's responsibility in addressing the mental health needs of young offenders must be narrowed and more targeted, all the while continuing to work in tandem with agencies that handle child care, education, and protection.** Research seems to suggest that more community-based treatment services and diversion programs would be most helpful for young offenders who are dealing with mental health issues, rather than focusing on creating new treatments that are evidence-based and utilized in the juvenile justice system.
- iii. A very open screening and evaluation process that complies with industry standards is necessary to plan and implement such services. Prospective studies with large sample sizes are advised for future study in order to ascertain the impact of psychiatric disorders and comorbidities on the long-term results of inmates, especially in adulthood.

## Disclaimer (Artificial intelligence)

### Option 1:

Author(s) hereby declares that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

## References

1. Adewuya AO, Famuyiwa, & Bakari. O, .(2017) Attention deficit hyperactivity disorder among Nigerian primary school children: Prevalence and co-morbid conditions. Eur Child Adolesc Psychiatry 16: 10-15
2. American Psychiatric Association, D. S., & American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders: DSM-5 (Vol. 5). Washington, DC: American psychiatric association.
3. **Baglivio, M. T., Wolff, K. T., Howell, J. C., Jackowski, K., & Greenwald, M. A. (2020). The search for the Holy Grail: Criminogenic needs matching, intervention dosage, and subsequent recidivism among serious juvenile offenders in residential placement. Journal of Criminal Justice, 55, 46-57.**

4. Boitt, R. K. (2016). The prevalence of alcohol abuses among Egerton University students in Njoro-Kenya (Doctoral dissertation, University of Nairobi).
5. Borschmann, R., Janca, E., Carter, A., Willoughby, M., Hughes, N., Snow, K., ... & Kinner, S. A. (2020). The health of adolescents in detention: a global scoping review. *The lancet public health*, 5(2), e114-e126.
6. Burke, A., Freeze, M. K., & Vorster, A. C. (2014). The role of parental style in the conduct disorders: A comparison between adolescent boys with and without conduct disorder. *Journal of Child & Adolescent Mental Health*, 26(1), 63-73.
7. Choi, B. S., Kim, J. I., Kim, B. N., & Kim, B. (2017). Comorbidities and correlates of conduct disorder among male juvenile detainees in South Korea. *Child and Adolescent Psychiatry and Mental Health*, 11(1), 1-7.
8. Coghill, D., Banaschewski, T., Cortese, S., Asherson, P., Brandeis, D., Buitelaar, J., & Simonoff, E. (2021). The management of ADHD in children and adolescents: bringing evidence to the clinic: perspective from the European ADHD Guidelines Group (EAGG). *European child & adolescent psychiatry*, 1-25.
9. Coghill, D., Banaschewski, T., Cortese, S., Asherson, P., Brandeis, D., Buitelaar, J., & Simonoff, E. (2021). The management of ADHD in children and adolescents: bringing evidence to the clinic: perspective from the European ADHD Guidelines Group (EAGG). *European child & adolescent psychiatry*, 1-25.
10. Coker, K. L., Smith, P. H., Westphal, A., Zonana, H. V., & McKee, S. A. (2014). Crime and psychiatric disorders among youth in the US population: An analysis of the national comorbidity survey-adolescent supplement. *Journal of the American Academy of Child & Adolescent Psychiatry*, 53(8), 888-898.
11. Colins, O., Vermeiren, R., Vreugdenhil, C., van den Brink, W., Doreleijers, T., & Broekaert, E. (2010). Psychiatric disorders in detained male adolescents: a systematic literature review. *The Canadian Journal of Psychiatry*, 55(4), 255-263.
12. DeLisi, M., & Vaughn, M. G. (2011). The importance of neuropsychological deficits relating to self-control and temperament to the prevention of serious antisocial behaviour. *International Journal of Child, Youth and Family Studies*, 2(1/2), 12-35.
13. Eme, R. (2020). Life course persistent antisocial behaviour silver anniversary. *Aggression and violent behaviour*, 50, 101344.
14. Frick, P. J. (2012). Developmental pathways to conduct disorder: Implications for future directions in research, assessment, and treatment. *Journal of clinical child & adolescent psychology*, 41(3), 378-389.
15. Gonzalez, R. A., Gudjonsson, G., Wolff, K., Xenitidis, K., Mutch, L., Mallet-Lambert, I., ... & Young, S. (2017). The pathway to substance misuse for young people with ADHD and conduct disorder. *Drug and alcohol dependence*, 171, e75.
16. Griffin, P., Addie, S., Adams, B., & Firestone, K. (2011). Trying juveniles as adults: An analysis of state transfer laws and reporting. Washington, DC: US Department of Justice, Office of Justice Programs, Office of Juvenile Justice, and Delinquency Prevention.

17. Haerle, D. R. (2016). Dosage matters: Impact of a violent offender treatment program on juvenile recidivism. *Youth Violence and Juvenile Justice*, 14(1), 3-25.
18. Hopfer, C., Salomonsen-Sautel, S., Mikulich-Gilbertson, S., Min, S. J., McQueen, M., Crowley, T., ... & Hewitt, J. (2013). Conduct disorder and initiation of substance use: a prospective longitudinal study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 52(5), 511-518.
19. Hosmer, A., Lemeshow, M., Eyre, O., & Langley, K. (1990). Practitioner review: what have we learnt about the causes of ADHD? *Journal of Child Psychology and Psychiatry*, 54(1), 3-16.
20. Keari, O. M., Alice, A. A., & W, M. S. (2024). Impact of Parental Deprivation on Academic Success of Children: A Study of Public Primary Schools in Masaba South, Kenya. *Advances in Research*, 25(6), 111–125. <https://doi.org/10.9734/air/2024/v25i61184>
21. Kim-Cohen, J., Caspi, A., Moffitt, T. E., Harrington, H., Milne, B. J., & Poulton, R. (2017). Prior juvenile diagnoses in adults with mental disorder: developmental follow-back of a prospective-longitudinal cohort. *Archives of general psychiatry*, 60(7), 709-717.
22. Kombo, L. S., Tromp, D. B., Tolan, P. H., Carter, A. S., Burns, J. L., & Briggs-Gowan, M. J. (2006); CDCEP. 2019. Putting theory to the test: modelling a multidimensional, developmentally based approach to preschool disruptive behaviour. *Journal of the American Academy of Child & Adolescent Psychiatry*, 51(6), 593-604.
23. Livanou, M., Furtado, V., Winsper, C., Silvester, A., & Singh, S. P. (2019). Prevalence of mental disorders and symptoms among incarcerated youth: a meta-analysis of 30 studies. *International journal of forensic mental health*, 18(4), 400-414.
24. Lola, H. M., Belete, H., Gebeyehu, A., Zerihun, A., Yimer, S., & Leta, K. (2019). Attention deficit hyperactivity disorder (ADHD) among children aged 6 to 17 years old living in Girja District, Rural Ethiopia. *Behavioural Neurology*, 2019.
25. Merikangas, K. R., He, J. P., Burstein, M., Swanson, S. A., Avenevoli, S., Cui, L., ... & Swendsen, J. (2010). Lifetime prevalence of mental disorders in US adolescents: results from the National Comorbidity Survey Replication–Adolescent Supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry*, 49(10), 980-989.
26. Nasir, A., Shahlavi, S., Chaudhry, A. G., & Rahman, B. (2015). Causes of Child Delinquency: Marxist Perspective. *Science International*, 27(1), 699-701.
27. Okutoyi, A. M. (2015). Rehabilitation of children in conflict with the law: a case of Shikusa borstal institution, Kakamega, Kenya (Doctoral dissertation).
28. Okwara, L. V. (2013). Prevalence of psychiatric morbidity among juvenile offenders committed to Borstal institutions in Kenya (Doctoral dissertation, University of Nairobi).
29. Omwenga, M., & Kayusi, F. (2024). Perception of Parents of Children With Mental Health in Kisii County, Kenya. *Asian Journal of Advanced Research and Reports*, 18, 264–278.
30. Omwenga, M., & W, M. S. (2024). The Influence of Sociodemographic Factors on Anti-social Behavior among Children: A Case of Bobaracho Area, Nyaribari Chache, Kenya.

31. Otieno, R. A., J. Kombo & M. Bowen, (2017). "establishment of dysfunctional family structures related to adolescent behaviour problems within the society: a case of shikusa borstal institution in kakamega county." *International Journal of Social Science & Economic Research* 2.5 3438-453.]
32. Philipp-Wiegmann, F., Rösler, M., Clasen, O., Zinnow, T., Retz-Junginger, P., & Retz, W. (2018). ADHD modulates the course of delinquency: a 15-year follow-up study of young, incarcerated man. *European archives of psychiatry and clinical neuroscience*, 268(4), 391-399.
33. Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson education.
34. Sharp, C., Dellis, A., Hofmeyr, A., Kincaid, H., & Ross, D. (2015). First evidence of comorbidity of problem gambling and other psychiatric problems in a representative urban sample of South Africa. *Journal of Gambling Studies*, 31(3), 679–694. <https://doi.org/10.1007/s10899-014-9469-y>.
35. Sibley, M. H., Pelham, W. E., Molina, B. S., Gnagy, E. M., Waschbusch, D. A., Biswas, A., ... & Karch, K. M. (2011). The delinquency outcomes of boys with ADHD with and without comorbidity. *Journal of abnormal child psychology*, 39(1), 21-32.
36. Villanueva, L., Valero-Moreno, S., Cuervo, K., & Prado Gascó, V. (2019). Sociodemographic variables, risk factors, and protective factors contributing to youth recidivism.
37. Wacheke, A. N. (2018). *The Relationship between Parenting Styles and Conduct Disorder among Children in Dagoretti Girls' and Kabete Boys' Rehabilitation Schools.*
38. Wang, M. (2017). Harsh parenting and peer acceptance in Chinese early adolescents: Three child aggression subtypes as mediators and child gender as moderator. *Child Abuse & Neglect*, 63, 30-40.
39. Young S, Moss D, Sedgwick O, Fridman M, Hodgkins P. (2015). A meta-analysis of the prevalence of attention deficit hyperactivity disorder in incarcerated populations. *PsycholMed.*, 1(45):247–58.
40. Zelechowski, A. D., Sharma, R., Beserra, K., Miguel, J. L., DeMarco, M., & Spinazzola, J. (2013). Traumatized youth in residential treatment settings: Prevalence, clinical presentation, treatment, and policy implications. *Journal of Family Violence*, 28(7), 639-652.

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