

## **Prevalence Of Behavioral And Emotional Problems Among Juvenile Girls Incarcerated At Kirigiti And Dagoretti Rehabilitation Schools In Kenya.**

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**ABSTRACT:** *The purpose of this study was to establish the prevalence of behavioral and emotional problems among Juvenile girls incarcerated in the two rehabilitation centers. The researcher sampled the only two girls public rehabilitation centers, at Kirigiti and Dagoretti schools. Studies on Juvenile delinquent have shown an overlap between delinquency and psychiatric disorder. The study sample had a total of 78 purposely selected adolescents in the two rehabilitation centers. The research found high prevalence of behavioral and emotional problems among girls incarcerated in the two schools. These Juvenile need psychological treatment as a key rehabilitation measure. Quantitative method was used to collect the data through the use of questionnaires and Achnbach Youth self report. YSR 11-18 years. The result of this study provided significant insight on behavioral and emotional problems; depression, anxiety, conduct disorder, Post traumatic stress disorder (PTSD) and Attention deficit hyperactivity disorder (ADHD) . The data was analyzed using SPSS version 21.*

**KEY WORDS:**

- Behavioral and emotional problems
  - Depression, anxiety, conduct disorder, PTSD and ADHD .
  - Depression
  - Incarcerations
  - Juvenile deliquency
- 

### **I. Background**

The prevalence of depression was established in the two schools. Depression is a common mental disorder that presents with depressed mood, loss of interest, feeling of low self worthy, low energy and poor concentration. It usually occurs as a result of adverse life events (Barley,2007). Depression usually starts in early adulthood, with likely recurrence. It affects women more often than men, (UNICEF 2011).

Depression has been recognized as a common problem for many years, it is a world wide phenomena (Pearson & Plackett, 2000). It affects individual of all ages. Recent research indicates that depression is increasing among teenagers and more so those who are incarcerated (OJo, 2012). People experience depression in different ways. The term depression covers a wide variety of symptoms (Schaeffer,2010). The general signs of depression may include sadness, apathy, fatigue, lack of interest, low self esteem, self criticism, poor concentration and loss of appetite.

The second prevalence that was surveyed by the researcher is anxiety. Individual with anxiety disorder experience excessive fear or worry, causing them to avoid situations that might precipitate the anxiety or to develop compulsive rituals that lessen the anxiety (Jongsma, 2006) everyone feel anxious in response to specific events. According to Lafortune, 2010

Individuals with anxiety disorder have excessive and unrealistic feelings that interfere with their lives in their relationship, school, work and other social events. The major symptoms of anxiety are; intense and prolonged feelings of fear and distress that occur out of proportion to the actual threat or danger (Leza, 2010). Anxiety disorder is always accompanied by feelings of fear and distress that interfere with normal daily functioning (Steinberg, 2013). Women are generally diagnosed with anxiety disorder more frequently than men, (World report 2010). Symptoms of anxiety disorder often develop during early adulthood (Steinberg, 2013).

The third behavioral and emotional prevalence that was observed was conduct disorder. Conduct disorder is a behavioral and emotional disorder that occurs in children and teenagers. A child with disorder may display a pattern of disruptive and violent behavioral and have problem following rules (Cohen, 1988). It is likely for children to have behavior related problems at sometime during their development. The behaviour is considered to be conduct disorder when it is long lasting and when it violates the right of others, goes against accepted norms of behavior and disrupt the child or family everyday life.

According to Siegel, (2010) symptoms of conduct disorder tend to vary depending on the age of the child, and whether the disorder is mild, moderate, or severe. The general symptoms of conduct disorder are aggressive behaviour, destructive behaviour, deceit and violation of rules. In addition children with conduct disorder are irritable, have low self esteem and tend to throw frequent temper tantrums. (Vitulano et al., 2010) children with conduct disorder do not consider how their behavior hurt others, moreover they have little guilt or remorse about hurting others (World report 2010).

The fourth prevalence that was established was Post traumatic stress disorder. PTSD is a mental health conditions that's triggered by traumatic event experienced or witnessed by the victim. The general symptoms of PTSD include flashbacks, nightmares and severe anxiety and unavailability thoughts about the events (Leza 2010). Post-traumatic stress disorder may start with one month after traumatic event. To be diagnosed with (PTSD), an adult must have re-experiencing avoidance, arousal and reactivity symptoms. Children and teens have extreme reaction to trauma, but their symptoms may not be the same as adults. In younger children less than six years the symptoms may include; bed wetting, forgetting, acting out and clingy with parents. Older children are more likely to show symptoms similar to those seen in adults. (Barley, 2007).

The last prevalence which was established was Attention Deficit Hyperactivity Disorder (ADHD). ADHD is a disorder that make it difficult for a person to control impulsive behaviour. People with ADHD are generally restless, constantly active, interrupt others, and they are generally active. (Steinberg, 2013). Symptoms of ADHD begin in childhood it can continue through adolescence and adulthood. Even though hyperactivity tend to decrease as children become teens, problem with inattention, disorganized, poor impulse control continue through teen years and into adulthood.

Current research suggest that behavioural and emotional problems may be caused by interactions between genes and environmental or non-genetic factors. These disorders appears to result from a complete interplay of genetic biological, developmental and other factors such as socio-economic variables. A variety of theories have been proposed to explain how these factors contribute to the development of these disorder.

#### Behavioural Problems among Juvenile girls

Hann, Miller, & Waldfoegel (2010) argued that one of the common behavioural problems among adolescents in rehabilitation institution is conduct disorder (Hann et al., 2010). The childhood onset subtype of the conduct disorder is more severe and is serious psychopathological, neuropsychological deficit and rejection by peers (Swisher & Roettger, 2012). The adolescent onset subtype is more common and less severe, and is associated with antisocial and aggressive behaviour committed in groups such as gangs (Boden, Fergusson, & Horwood, 2010). The youth may be popular especially with anti-social peers (OJo, 2012). This type of conduct disorder frequently dissipates in adulthood (Zelechowski, Sharma, Miguel, Demarco & Spinazzo, 2013). The adolescent onset subtype of conduct disorder can be viewed as an exaggeration of developmentally normal adolescent rebellion and experimentation with forbidden activities (Kang & Burton, 2014).

Kang & Burton argued that conduct disorder often occurs with attention deficit hyperactivity disorder (ADHD). The weaknesses in language and attention appear to contribute to the deficits in self-control, emotional regulation, problems solving and social skills that are associated with conduct disorder (Ebesutani, Bernstein, Martinez & Chorpita, 2011). It has been noted that youth with conduct disorder have high rates of depression and anxiety (Vitulano, Fite, & Rathert, 2010). Adolescents' conduct disorder may lead to a number of negative adult outcomes in addition to criminality (Ebesutani et al., 2011). If left untreated, conduct disorder can lead to psychiatric problems, and also in the later year's marital difficulties, alcoholism, unemployment and mental illnesses (Zimmerman & Pogarsky, 2011).

Butler, Baruch, Hickley, & Fonagy (2011) argued that conduct disorder has a core element of hedonism. The youth does what feels good at the moment, acting out impulses such as disobeying adults, refusing to do school work, engaging in sexual activity, and using drugs (Butler et al., 2011). It is important to treat these young

people before releasing them to the wider society. Conduct problems in adolescents have been a major focus of research and practice in adolescent psychology for a number of reasons (Sawyer & Borduin., 2011).

Conduct disorder are some of the most common reasons that children and adolescents are referred to rehabilitation schools (Butler et al., 2011). According to Butler et al. 2011 conduct disorder usually causes significant disruptions for the adolescents at home and school. They are in fact, the form of psychopathology most strongly associated with delinquency.

Conduct problems constitute a broad spectrum of acting out behaviour ranging from relatively minor oppositional behaviour such as yelling and temper tantrums, to more serious forms of antisocial behaviour such as aggression, physical destructiveness and stealing (Zelechowski et al., 2013). Another important finding from research is that youth with conduct problems are at increased risk for manifestation of a variety of other adjustment problems as well (Ebesutani et al., 2011).

The most important issue in most cases of adolescents with Conduct disorder is the need for a comprehensive assessment (Jessica et al., 2014). Adequate assessment of a youth with conduct disorder should make use of multiple methods (e.g. interviews, behaviour rating scales and observation) completed by multiple informants (parents, teachers, youth) and concern multiple aspects of the child's or adolescent's adjustments e.g. (conduct disorder, anxiety, learning problems) in multiple settings (e.g. home, schools) (Jessica et al., 2014). Conduct disorder is highly prevalent among juveniles incarcerated in rehabilitation schools (Surup & Heather, 2014), noted that youth involved in juvenile delinquency have psychological comorbidity.

Psychological comorbidity may make treatment needs more complex. Studies show that people who started drinking at the age of 14 are five times more likely to become alcoholics than people who held off drinking until age 21 (Johnson, Whisman, Corley, Hewitte & Rhee et al., 2012). They noted that there was a direct influence on chemicals and minerals to the brain. It was therefore possible that early exposure of the brain to alcohol would affect the growth of the brain cells impairing learning and memory processes that protect against addiction and ultimately behavioural and emotional problems. Childhood aggression, theft and destructions along with related externalizing disorders such as CD and ODD are common among youth with substance use disorder (SUD) as well as among children of parents with the disorders. (Vitulano, Fite, & Rathert, 2010).

The most common mental health disorders seen among juvenile offenders are conduct disorders, oppositional defiant disorder, major depressive disorders, dysthymic disorders, bipolar disorders, post-traumatic stress disorder, intellectual disability and learning disorders (Steinberg, 2013). Juveniles entering the justice system typically manifest complex mental health and behavioural health needs (Ige, 2014). A lack of community-based treatment has resulted in youth with mental health disorders being placed in the juvenile justice system for minor and non-violent offence (Mulatie, 2014). Several mental health factors also contribute to juvenile delinquency. It is important to keep in mind that diagnosis of certain types of mental health conditions, primarily personality disorders, cannot be made about a child (Watindi, 2012). However, there are precursors of these conditions that can be exhibited in childhood that tend to end up being displayed through juvenile delinquent behaviour (Zimmerman & Pogarsky, 2011).

Research conducted to date suggests that subtle differences in certain biological functions and psychological traits may contribute to gender-related variation in responses to certain environmental conditions (Lewin, 1990). These basic differences may, in effect, partially account for ways in which girl's delinquency is contrasted with that of boys (Olivia, 2013).

One theoretical model for understanding individual-level factor in girls' delinquency proposes that although similar risks factors may play a role in both girls' and boys' delinquency, gender differences in underlying biological functions, psychological traits, and social interpretations can result in different types and rate of delinquent behavior for boys and girls (Leza, 2010). Another view suggests that boys and girls are differentially exposed to certain risk conditions, placing them at variable risk for certain types of delinquency (Henggeler, 1992). For example, there is evidence that girls experience a greater number of negative life events during adolescence than boys, and they may, in turn, be more sensitive to their effects, particularly when they emanate from within the home (Siegel, 2010). Further research is critical to determine the extent to which and how biological factors play a role in differences between girl's delinquent behavior and that of boys (Skelton, 2010).

Exposure to severe or cumulative stressors-and responses to them-are strongly associated with risk taking behavior, including delinquency (Borduin, 2011). Stressors are conditions that elicit strong negative responses

and that are perceived as uncontrollable and unpredictable (Kikivi, 2012). Such conditions produce alterations in the body's stress responses that disrupt cognitive and emotional process, thereby increasing the likelihood of risky behaviors in vulnerable adolescents (Siegel, 2010). Although this is true for both boys and girls, studies have identified some gender differences in rates and types of exposure to stressors. For example, although girls in juvenile justice system are more likely to have a history of abuse and neglect than non justice-involved girls (Wilde mann, 2010), there is further evidence that girls more often experience certain types of trauma (e.g, sexual abuse and rape) than boys (Kikivi 2012).

Many studies of special population suggest that the incidence of sexual abuse is more pervasive among girls who engage in antisocial behavior, particularly those who engage in violent behavior, than among their male counterparts (Lewin, 1990). On the other hand, the incidence of physical abuse appears to be more equally distributed between boys and girls in population (Henggeler, 1992). In addition to gender differences in exposure to certain stressors, girls and boys may also vary in their sensitivity to the same stressor. For example, there is some suggestion that girls may be more sensitive to dysfunction and trauma within the home (Henggeler, 1992).

Gender differences have also been noted in mental health risk factors for delinquency. For example, boys outnumber girls by a ratio of 3:1 in the diagnoses of attention-deficit/hyperactivity disorder (ADHD) and conduct disorder, which are known risk factor for problem behavior and delinquency in boys (Lewin, 1990). Although girls exhibit lower levels of delinquency associated with these disorder, mental health problems linked to life stressors and experiences of victimization, such as depression, anxiety, and posttraumatic stress disorder, are diagnosed at much higher rates among girls than boys. Although these disorders are also associated with delinquency among boys, the relationship appears to be much stronger for girls (Lafortune, 2010).

Early puberty in girls has been associated with family dysfunction. In addition early puberty interacts with mental health disorders, ADHD, and cognitive and emotional deficits to potentially worsen behavioral outcomes (Kikivi, 2012). Although the timing of puberty is also potential risk factor for boys, early maturation creates particular risks for girls because of development of physical signs of maturity inconsistent with still largely undeveloped cognitive and emotional systems (Lewin, 1990).

Several studies suggest that early maturing girls are more likely to engage in delinquency and other risk taking behaviors. A longitudinal study of 931 males and females (Henggeler, 1992), found that early onset of puberty among girls continued to predict increase risk behavior into adulthood. Some studies find that compared with other girls, early-maturing girls are at increased threat of various high risk behavior such as substance abuse, running away, and truancy (Lafortune, 2010). Early maturation in girls also appears to be a risk factor in exposure to intimate partner violence in adolescence (Lewin, 1990).

Henggler. (1992) contends that adolescents experience a maturity gap between their level of biological development and their desire to attain adult status. For some adolescents, delinquency may be an attempt to achieve independence and autonomy from parental control and to evidence maturity in social realm. It is clear that factors such as economic disadvantaged, exposure to violence, experiences with physical and sexual child abuse and maltreatment, and lack of positive parental supervision affect the development of delinquency for both girls and boys. Early puberty, coupled with stressors such as conflict with parents and involvement with delinquent (and often older) male peers, is a risk factor unique to girls (Lewin, 1990).

ADHD is the most commonly diagnosed childhood disorder, affecting an estimated 3 to 5 percent of school age children (Siegel, 2010). It occurs more often in boys than girls, in some studies by a 5:1 ratio (Cheung & Cheung, 2010). Research suggests that the condition may have a genetic component because ADHD is diagnosed more frequently in children who have close biological relatives with ADHD than in the general population (Bella et. al, 2010).

The core symptoms of ADHD include inattention, hyperactivity, and impulsivity (Siegel, 2010). Children who are inattentive and easily distractible have difficulty focusing on a task and may become bored after only a few minutes (Barley, 2007). They often initiate a number of tasks but fail to complete them. Hyperactive children seem to be constantly in motion. They have difficulty sitting still, may wander around the room, squirm in their seats, or repeatedly tap a pencil (Lewin, 1990). Impulsive children tend to act without thinking and often seem unable to control their immediate reactions to people, event, or even their own thoughts and feelings. As a result, they may seek without thinking or dash into the street without looking for traffic (Jongs ma, 2006). Most children (and adults) experience transient episodes of these symptoms, perhaps due to stress or in response to certain medications. Younger children tend to be more active and have shorter attention spans than older ones

(Siegel, 2010). These symptoms indicate ADHD only if they occur over an extended period of time, typically for at least 6 months; begins before age 7; appears in different settings; and occur at a level that is both performance impairing and developmentally inappropriate (Lewin 1990). A thorough and comprehensive evaluation for ADHD should include input from both parents and teachers (Skelton, 2010).

Children with ADHD may appear functionally impaired in many areas and may engage in a broad array of a problem behavior that frustrate and disrupt family, school, and peer relationships. Their inability to sit still and pay attention in class may lead to school failure, truancy, and dropping out (Siegel, 2010). For many individuals, the effects of untreated ADHD continue into adolescent and adult-hood. As they grow older, children with untreated ADHD often in combination with oppositional-defiant and conduct disorders may abuse drugs or alcohol, engage in antisocial behavior, and suffer physical injury at a higher rates than the general population (Olivia 2013). Later impairment can include vocational and social problems, low self esteem, and a higher incidence of automobile accidents. Boys with ADHD are at increased risk for engaging in delinquent and antisocial behavior (Olivia 2013). Researchers know less about the long- term consequences of ADHD in girls because of lack of relevant longitudinal research; however, current studies suggest that ADHD can also have long-term negative effects on girls (Siegel, 2010)

A study by Maru, Kathuku, and Ndeti, (2003) on psychiatric morbidity among children and the young persons appearing in the Nairobi Juvenile Court in Kenya indicated that prevalence of psychiatric morbidity among children was 80%. The study participants were 90 (64 males and 24 females) aged 8 to 18 years classified as criminal offenders. Maru et al. (2003) used socio-demographic questionnaire. Follow up Interview for Children (FIC) presented state examination (PSE) and clinical interview methods of data collection. International classification of disease (ICD), 10<sup>th</sup> edition diagnostic criteria was used (Maru et al., 2003). The authors recommended that those in juvenile delinquency would benefit from mental health treatment as stipulated in section 18 of cap 141 of laws of Kenya, and the Children and Young Persons' Act. The act stipulates that all children have a right to mental health including those incarcerated in rehabilitation centres (G.O.K, 2010).

A preliminary study carried out by the researcher at Kirigiti Rehabilitation School in 2013 found out several problems encountered by adolescents incarcerated in rehabilitation schools. For example, the process of admission in these schools had no fixed time; with admission taking place throughout the year. He also noted confusion occasioned by classes having children of mixed ages and levels of education. This was mainly due to the shortage of teachers which slowed down the learning process while frequent transfer of teachers affected the learning and rehabilitation process.

#### History of Rehabilitation Centres in Kenya

Kirigiti Rehabilitation Center originated from the colonial era. The first rehabilitation centre was built at Kabete (near Nairobi) in 1910 (Mugo, Musembi, & Kangethe, 2006). These centres were built to cater for antagonistic and deviant children and youth who were at loggerheads with the colonial law. Most of the targeted children had failed to register and carry identity cards. Several institutions of similar nature came up during the colonial era to cater for the rising numbers of children and youth in need of care and protection particularly those who had been orphaned as a consequence of the Mau Mau War. Kirigiti rehabilitation School was originally established to cater for delinquent girls; around 70% of the children in the institution were just destitute with most having been on the street (Mugo, Musembi & Kangethe et al, 2006). According to Mugo et al., delinquency is associated with problematic socio-economic background. The majority of child offenders in the rehabilitation schools come from poor and broken homes. Petty theft was the most commonly committed felony, attributed to bad company and monetary deprivation (Mugo et al., 2006).

#### Juvenile girls Incarcerated in Rehabilitation Centres in Kenya

Rehabilitation schools are established under part of the Children's Act 2001 (G.O.K, 2010). The Act states that it is the responsibility of the government of Kenya to establish schools for the care and protection of children.

There are different categories of schools to cater for the children based on sex, age and purpose of placement. The first categories are rehabilitation schools. The main purpose of these rehabilitations school is to teach, train and rehabilitate children. Supervision of these schools is the responsibility of the director of children's services. The rehabilitation schools are geared towards crime prevention they also impart offenders with life skills. The children's service department currently runs the following ten rehabilitation schools; Nairobi, Getathuru, Wamumu, Othaya, Likoni, Kericho, Kakamega, Kabete, Kirigiti and Dagoretti. Kirigiti and Dagoretti schools are for girls only; the other eight admit boys only. Rehabilitation schools admit children who are between 10 to 18 years. As they wait to be convicted or released by the court, they are taken to children's remand homes (Mugo et al., 2006).

The second category of institution which was established by the Children's Act 2001 is Borstal institutions. Borstal institutions admit children who are above the age of 15 years and ought to have committed serious crimes. These institutions are supervised by the Commissioner of Prisons. The last category is probation hostels; the hostels cater for the children who have committed an offence and have been found guilty but need protection. They are supervised by the Director of Probation Services. Probation hostel admits children who are between 10-18 years (Achieng, 2009).

#### Statement of Problem

Juvenile delinquency is a serious problem in the modern society with multiple negative effects on health, educational, financial, vocational and judicial system (Ojo, 2012). For example, a study on juvenile delinquency conducted in South Africa, Nigeria, Kenya and Cameroon revealed that 40% of the adolescent offenders abused drugs and alcohol (UN-Habitat, 2013). In Kenya, crime rate is on the rise and most youthful criminals have been shown to have behavioural problems. The common behavioural problems among youth incarcerated in rehabilitation schools are conduct disorder, anxiety, and depression (Griffin, 2010). Follow up studies into adult life showed that antisocial behaviour in adolescents increased risk of adult criminality (Enzmann & Podan, 2011). The researcher was addressing behavioural problems among Juvenile delinquents in rehabilitation schools.

### II. OBJECTIVES

- i. To determine the prevalence of depression, anxiety, conduct disorder, Post traumatic stress disorder (PTSD) and attention deficit hyperactivity disorder (ADHD) of adolescence girls incarcerated at Kirigiti and Dagoretti rehabilitation schools.

### III. METHODOLOGY

The study used descriptive survey research design. The researcher will use Achenbach youth self-report 11-18 years ASEBA. The researcher will establish the prevalence of selected behavioral and emotional problems. Hence the study will not make predictions or determine cause and effects of selected behavioral and emotional problems.

#### Sample Size

The entire population for this study consisted of two rehabilitation schools. The researcher purposively sampled the two girls' rehabilitation schools. The following table illustrates the rehabilitation schools establishments.

*Table 1: Rehabilitation Schools Establishment*

School	Year Established	Gender	(10-18yrs) population of adolescents with conflict with the law	Regions
Nairobi	1978	Male	125	Nairobi
Getathuru	1959	Male	098	Nairobi
Wamumu	1975	Male	150	Eastern
Othaya	1959	Male	130	Central
Likoni	1963	Male	120	Coast
Kericho	1972	Male	101	Western
Kakamega	1965	Male	118	Western
Kabete	1910	Male	180	Nairobi
Kirigiti	1964	Female	101	Central
Dagoretti	1957	Female	103	Nairobi
<i>TOTAL</i>			1230	

Source: Kenya Probation Service Department, 2014.

The second objective was to establish the relationship between the social-demographic characteristics and the emotional and behavioral problems in girls incarcerated at the rehabilitation centers.

As indicated earlier, a study by Maru et al. (2003) noted that 80% of the adolescents incarcerated in rehabilitation school have psychiatric and psychological problems. Hence using Table 3.1, the study population was 204, which is the whole population of adolescent girls in rehabilitation schools. All the girls in Kirigiti and Dagoretti rehabilitation centers were used in this study.

After administering youth self-report in the two schools, the researcher then randomly selected one school to be the control site while the other one was the experimental site by flipping a coin in the air; the head was Kirigiti while the tail was to be the Dagoretti. Each school had an equal chance of being selected as a Dagoretti or Kirigiti group by the researcher. After random selection Kirigiti became the experimental site while Dagoretti was the control group. A total of 85 participants were enrolled in the two groups namely; Dagoretti(n=40) and Kirigiti; (n=45). The attrition rate was 8.2%. Eventually Kirigiti group had 38 respondents while Dagoretti group had 40 respondents.

#### Data Collection Instruments

The following instruments were used to collect data from the sampled respondents.

- (i) Socio-demographic profile questionnaire
- (ii) Achenbach Youth self-report 11-18
- (iii) Secondary data abstracted from admission files

#### IV. Socio-demographic questionnaire

The researcher developed socio-demographic questionnaire on the background information of the participants. In developing the instrument, the researcher ascertained that there were enough items to measure the indicators in the study. The items in this tool included, age, class, county and religion of the participants.

Achenbach youth self-report 11-18 years (ASEBA)

The author of YSR 11-18 is Achenbach, M (Achenbach, 2001). Youth self-report (YSR) is part of the Achenbach system of empirically based assessment (ASEBA). The ASEBA approach originated in the year 1960s. Achenbach is what developed a more differentiated picture of a child and the adolescent psychopathology than that provided by the prevailing diagnostic system (Achenbach, 1991). Achenbach was mainly interested in investigating diversity of symptoms that could bring children to psychiatric treatment. The Achenbach system of empirically- based assessment for school aged children include three instrument for assessing emotional and/or behavioural problems: Child behavioural check list (CBCL) completed by parents, Youth Self-Report (YSR), completed by adolescents and Teachers Report Form (TRF), completed by teachers (Achenbach,1991).

In this study the researcher used Achenbach Youth self-report 11-18 years.

#### METHOD OF DATA COLLECTION

The researcher sought the Nairobi Hospital Ethics Board approval to conduct this study, and then permission from the Children's Department was received in Nairobi headquarters. National Council of Science and Technology approved the study as well. After that, the researcher proceeded to the Kirigiti and Dagoretti rehabilitation centers to explain to the management the purpose of the study. After getting permission to carry out the study in these centers, the researcher put an advert on the school notice boards (Kirigiti and Dagoretti). The researcher used school bulletin notice board to provide brief information on the study basically targeting girls aged between 11-18 years. The advert was basically meant to create awareness of the study as well as duration.

All adolescents who participated in the study assembled in the school hall where the researcher introduced the research assistants and highlighted his expectations. The respondents were given time to ask questions before they started the exercise. Each group was given about fifty minutes to fill the socio- demographic profile questionnaire and youth self- report (ASEBA). The researcher assigned respondents numbers in order to hide their identity; this number was to be used in both documents

*Table 2: presents a comparison of the Dagoretti and Kirigiti groups at baseline.*

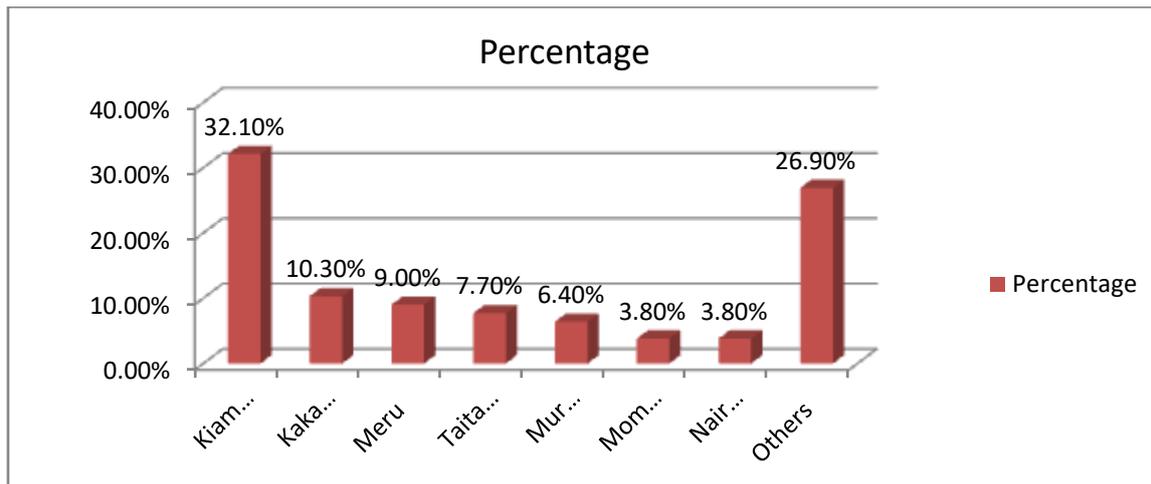


Figure 2: Distribution of Girls Incarcerated at Rehabilitation Centers per County (N=78)

Figure 2.1 presents the county distribution of girls incarcerated in the Kirigiti and Dagoretti groups. Others counties not included in the figures were included Samburu, Kisumu, Migori, Kajiado, Bungoma, Busia, Nyandarua, Nandi, Nyeri, Machakos, Makueni, Kirinyaga, and Nakuru counties.

According to Figure 2.1, 32% (n=25) of the girls were from Kiambu County, 10% (n=8) from Kakamega County, 9% (n=3) from Meru County, 7.7% (n=6) From Taita Taveta, 3.8% (n=3) from Mombasa and Nairobi counties. Figure 4.1 shows that the simple majority of the respondents came from Kiambu County because Kirigiti School is located in Kiambu County, while Dagoretti borders Kiambu County.

Table 3: Comparison between Kirigiti and Dagoretti Groups at Baseline In terms of Social Demographic Factors

Background	Kirigiti	Dagoretti	P Value
Age	14.3674 (95% CI: 14.3674 – 15.2542)	14.8684 (95% CI: 14.4628 – 15.2740)	<b>0.001</b>
Class (mean)	5.73 (95% CI: 5.31 – 6.15)	5.82 (95% CI: 5.43 – 6.20)	<b>0.002</b>
Class (median)	6.00	6.00	<b>0.021</b>
Religion			
Catholic	16/38 (42.1%; 95% CI: 26.4% to 57.8%)	19/40 (47.5%; 95% CI: 32.02% to 62.98%)	<b>0.0374</b>
Protestants	16/38 (42.1%; 95% CI: 26.4% to 57.8%)	20/40 (50.0%; 95% CI: 34.51% to 65.49%)	
Islam	6/38 (15.8%; 95% CI: 4.2% to 27.4%)	1/40 (2.5%; 95% CI: -2.34% to 7.34%)	
School dropouts			
Yes	24/38 (63.2%; 95% CI: 47.87% to 78.53%)	22/40 (55.0%; 95% CI: 39.58% to 70.42%)	<b>0.0464</b>
No	14/38 (36.8%; 95% CI: 21.47% to 52.13%)	18/40 (45.0%; 95% CI: 29.58% to 60.42%)	
Disadvantaged Family Social Economic Status			
Yes	30/38 (78.9%; 95% CI: 65.93% to 91.87%)	34/40 (85.0%; 95% CI: 73.93% to 96.07%)	0.486
No	8/38 (21.1%; 95% CI: 8.13% to 34.07%)	6/40 (15.0%; 95% CI: 3.93% to 26.07%)	
Single Families			
Yes	24/38 (63.2%; 95% CI: 47.87% to 78.53%)	28/40 (70.0%; 95% CI: 55.8% to 84.2%)	0.522
No	14/38 (36.8%; 95% CI: 21.47% to 52.13%)	12/40 (30.0%; 95% CI: 15.8% to 44.2%)	

*Table 4: The Prevalence of Internalizing and Externalizing Problems of Adolescent in Kirigiti and Dagoretti Group.*

<i>Internalizing Problems</i>		<i>Externalizing Problems</i>			
	Pre of Depression (n, %); 95%CI	Pre of Anxiety disorder (n, %); 95%CI	Prevalence of PTSD (n, %); 95%CI	Pre of Conduct Disorder (n, %); 95%CI	Prevalence of ADHD (n, %); 95%CI
Overall Prevalence	52/78 (66.7%; 95%CI 56.24% to 77.16%)	55/78(70.5%; 95%CI 60.38% to 80.62%)	65/78(83.3%);95%CI 73.5% to 90.0%	43/78(55.1%;95%CI) 44.06% to 66.14%	29/78(37.2%);95%CI 27.3% to48.3%
Study Kirigiti Site	30/38(78.9%;95%CI 65.93% to 91.87%)	33/38(86.8%;95%CI 76.04% to 97.56%)	34/38(89.55);95%CI 75.9% to 95.8%	20/38(52.6%;95%CI 36.72% to 68.4%)	17/38(44.7%);95%CI 30.2% to 60.3%
Dagoretti Group	22/40(55.0%;95%CI 39.58% to 70.42%)	22/40(55.0%;95%CI 39.58% to 70.42%)	31/40(77.5%);95%CI 62.5% to 87.7%	23/40(57.5%;95%CI 42.18% to 72.82%)	12/40(30.0);95%CI 18.1% to 45.4%

Table 4 presents the prevalence of behavioural and emotional problems of adolescent girls incarcerated at Dagoretti and Kirigiti rehabilitation schools. According to the table, girls who exhibited depression in the experimental and control groups were 78.9% and 55% respectively. Anxiety prevalence rate in the experimental and control groups were 86.8% and 55.0% respectively. In addition, the prevalence rate for conduct disorder in the experimental and control groups were 52.6% and 57.5% respectively. Overall prevalence of depression, anxiety and conduct disorder were 66.7%, 70.5% and 55.1% respectively. Table 4. further depicts that the prevalence of depression and anxiety disorder was greater/ higher among the t experimental group as compared to the control group.

**KEY FINDINGS**

1. Prevalence of affective problem depression (APD), anxiety disorder (AD), and conduct disorder (CD) were 66.7%, 70.5 and 55.1% respectively in the study population.
2. Prevalence of the attention deficit hyperactivity disorder (ADHD) and the post traumatic stress disorder (PTSD) was 37.2% and 44.2% respectively among the respondents
3. There was a strong positive statistical association between single parent families and affective problem depression. Adolescents from single parent families were more likely to have affective problems depression as compared to those coming from both parent family.
4. Older adolescents (>16yrs) were less likely to have anxiety disorder as compared to those who were younger (<14yrs).
5. The results demonstrate that respondents’ affective problems depression and anxiety disorder were positively correlated. The study population with affective problem depression were more likely to have anxiety disorders.
6. MST was equally effective in dealing with selected emotional problems (affective problem depression and anxiety disorder) and selected behavioural problems (conduct disorder).
7. The high prevalence of behavioural and emotional problems could be attributed to low socio- economic status, poor family support system, low education levels, and substance abuse among adolescents incarcerated in rehabilitation schools.
8. The main factors contributing to the adolescents being in conflict with the law included; poor socio-economic status, child abuse and neglects as well as negative peer group influence.

**CONCLUSION**

1. Further research can be conducted on the post- institutional phase of rehabilitation, such as recidivism. There is need to research on how to trace children after release from rehabilitation. Institution management

should determine the rate of post institutional success or failure. Research on the effectiveness of exit strategies is also necessary particularly if reintegration of children into society is to succeed.

2. A study can be conducted on preventive programme of juvenile delinquency at the community level. There is need for a wider survey promoting understanding of juvenile delinquency risk factors. If risk factors were comprehensively established, then it would be easy to structure preventive programme at the community level.
3. Topic like; “link between research findings and implementation in rehabilitation schools” would make interesting area for further research. There is need to move from theoretical substance to action orientation in order to deliver tangible results in rehabilitation schools.

### **IMPLICATIONS**

The majority of the adolescents in this study came from dysfunctional families. In addition, the study also found their parents were low income earners. The main limitation noted in the institution of juvenile justice system included inadequately trained personnel and lack of professional counselors. From the outcomes of this study, it can be observed that there is need for more proactive involvement in the provision of mental and physical health of adolescents in rehabilitation schools. Qualified clinical psychologists can be assigned to the children’s courts, to advice on the care of mentally disordered children. Frequent screening can also be carried out for all children in the rehabilitation institutions. The prevention of delinquency is a complex problem with no simple solution. However, risk factors analysis is a way to determine which adolescents are most likely to become delinquent. The approach would allow Therapists to tailor the prevention program to the unique needs of individual adolescents and community at large.

### **RECOMMENDATIONS**

From the findings of this study, the following recommendations are proposed;

1. There is need for psychological testing service in rehabilitation schools to enhance proper and accurate assessment, diagnosis and treatment of behavioural problems among incarcerated adolescents.
2. Rehabilitation programme can be constantly evaluated to ensure effectiveness and the relevance. In order to enhance reforms, rehabilitation schools should be graded and classified to avoid the mixing of delinquents and non- delinquents.
3. The ministry of labour, social security and services through children department- to create psychoeducation- programs meant to educate incarcerated girls on life skills. The ministry can also enforce Children Acts and educate children on their rights.
4. Rehabilitation schools management to consider starting peer counseling clubs. Peers are deemed more credible sources of information because they have experienced similar struggles and are therefore able to speak the same language by offering practical support and positive role modeling to their colleagues. Moreover peer led approaches result in increased motivation in bringing about change.
5. Ministry of labour, social security and services to join hands with the ministry of education, science and technology to ameliorate understaffing of teachers in rehabilitation schools. Rehabilitation schools are grappling with severe shortage of teachers which is affecting rehabilitation programmes. For instance Kirigiti and Dagoretti rehabilitation schools have glaring teaching staff gaps.