

**TO ESTABLISH THE RELATIONSHIP BETWEEN SOCIO-  
DEMOGRAPHIC CHARACTERISTICS, AND CONDUCT DISORDER  
AMONG GIRLS INCARCERATED AT KIRIGITI AND DAGORETTI  
REHABILITATION SCHOOLS IN KENYA.**

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**ABSTRACT**

Behavioural problems have remained a critical problem among girls incarcerated in rehabilitation schools. The purpose of this study was to establish the relationship between socio-demographic characteristics and conduct disorder among girls incarcerated at Kirigiti and Dagoretti rehabilitation schools. The researcher purposively sampled the only two girls' government rehabilitation schools at Kirigiti and Dagoretti in Kiambu and Nairobi counties respectively. Quantitative method was used to collect the data through the use of questionnaire and Achenbach youth self-report (YSR) (11-18 years). Baseline data was collected in the two sites. The data was analyzed using SPSS version 21. T-test, Chi square, Anova as well as Ancova tests were carried. The prevalence rates conduct disorder was 55%.

**Keywords:** Conduct disorder, rehabilitation, and incarcerated.

**1.0 INTRODUCTION**

In Kenya, the numbers of juvenile delinquents that joined rehabilitation school have been increasing from the year 1990; with the total juvenile arrest rates peaking in 1996 at 9,443 per 100,000 among youth aged 10 to 18 and falling by one-third in 2008 to 6,318 per 100,000 (Griffin, 2010). This trend changed with the current juveniles in custody having increased by over 60 % (2008-2012) from 6,318 to 13,108 per 100,000 (Griffin, 2010). Many Juvenile delinquents are apprehended for committing crimes such as disorderly conduct, drug and substance offences, prostitutions, truancy, loitering, as well as possession of stolen properties. It is important to note that not all girls in the rehabilitation centers are convicted for crimes. Some girls in these centers are victims of crime, or neglect by their families, hence they join rehabilitation centers for care and protection. They stay in these schools for a maximum of three years only, after which they are integrated back to their families and community at large.

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). Behavioural Problems among Juvenile Girls Hann, Miller, and Waldfogel (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 conduct disorder is more severe and is associated with serious psychopathological, neuropsychological deficit and rejection by peers (Swisher & Roettger, 2012). The adolescence 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 adolescence 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 and 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 years, marital difficulties, alcoholism, unemployment and mental illnesses (Zimmerman & Pogarsky, 2011).

Butler, Baruch, Hickley, and 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 problems 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). Comprehensive assessments should include multiple informants (parents, teachers, and 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 and 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., 2012). Johnstone et al. 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 Conduct Disorder and ODD are common among youth with substance use disorder (SUD) as well as among children of parents with the disorder. (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 girls' 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 girls' 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 (Bordium, 2011). Stressors are conditions that elicit strong negative responses and that are perceived as uncontrollable and unpredictable (Kikuvi, 2012). Such conditions produce alterations in the body's stress responses that disrupt cognitive and emotional process, thereby increasing the likelihood of risky behaviors

A study by Maru, Kathuku, and Ndeti (2003) on psychiatric morbidity among children and the young person's appearing in the Nairobi Juvenile Court in Kenya indicated that prevalence of psychiatric morbidity among children was high. The study participants were 90 (64 males and 26 females) aged 8 to 18 years classified as criminal offenders. Bordium (2011) 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 (GOK, 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. The researcher 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.

## **2.0 DATA AND METHODOLOGY**

This study used quasi-experimental design with one girls' rehabilitation school being an experimental site and the other the control site. Kirigiti and Dagoretti have similar study populations. After conviction, girls can either join Kirigiti or Dagoretti depending on availability of space. There is no significant difference between the two schools ( $p < 0.005$ ).

### **Study Population**

The researcher carried out the study at Kirigiti and Dagoretti girls' schools both of which are the only two girls' government correctional and rehabilitation schools in Kenya. While working in girls rehabilitation centers, the researcher observed that a number of juvenile girls had emotional and behavioral problems. Hence the researcher was prompted to carry out a study on girls' rehabilitation schools. Kirigiti is approximately 16 km from Nairobi city via Kiambu Road and is in Kiambu County. Dagoretti on the other hand, is approximately 20km from Nairobi city via Dagoretti road in Nairobi County. The centers accommodate girls who have criminal records as well as those who are in need of care and protection. Apart from providing rehabilitation, the two schools provide the regular government 8-4-4 primary education system. The centers provide vocational skills which include tailoring, hair dressing and agriculture as well. The catchment area for Kirigiti and Dagoretti is the entire country.

### **Data Collection Instruments**

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

1. Socio-demographic profile questionnaire
2. Achenbach Youth self-report 11-18
3. Secondary data abstracted from admission files

### **Socio-demographic questionnaire**

The researcher developed a 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 M. Achenbach (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 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.

YSR was developed in 1991 by Achenbach system of empirical-based assessment (ASEBA) and revised in 2001 by Ebesutani et al. (2011). It is one of the tools that are widely used for the child and the adolescent. It assesses problem behaviour and social competencies along two broad band scales, namely internalizing and externalizing (Achenbach, 2001). YSR targets school-going children and adolescents who are between 11 to 18 years. The YSR was designed to assess the emotional and behavioural problems in adolescents (Achenbach, 2001). The researcher used YSR to assess depression, anxiety, conduct disorder, attention deficit hyperactivity disorder, and post traumatic stress disorder. The 2001 revised YSR is made up of 112 items which are scored using a three-point Likert scale; 0 = absent, 1 = occurs sometimes, 2 = occurs often. YSR yields score on eight empirically derived syndrome scales as follows; anxious depressed, withdrawn depressed, somatic complains, social problem, thought problem, attention problem, rule breaking behaviour and aggressive behaviour (Achenbach, 2001). In this study, the researcher used self-administered method, where if a respondent had any challenge, he employed clinician administered format and referred to the YSR manual for detailed scoring information.

### **Reliability and Validity of YSR**

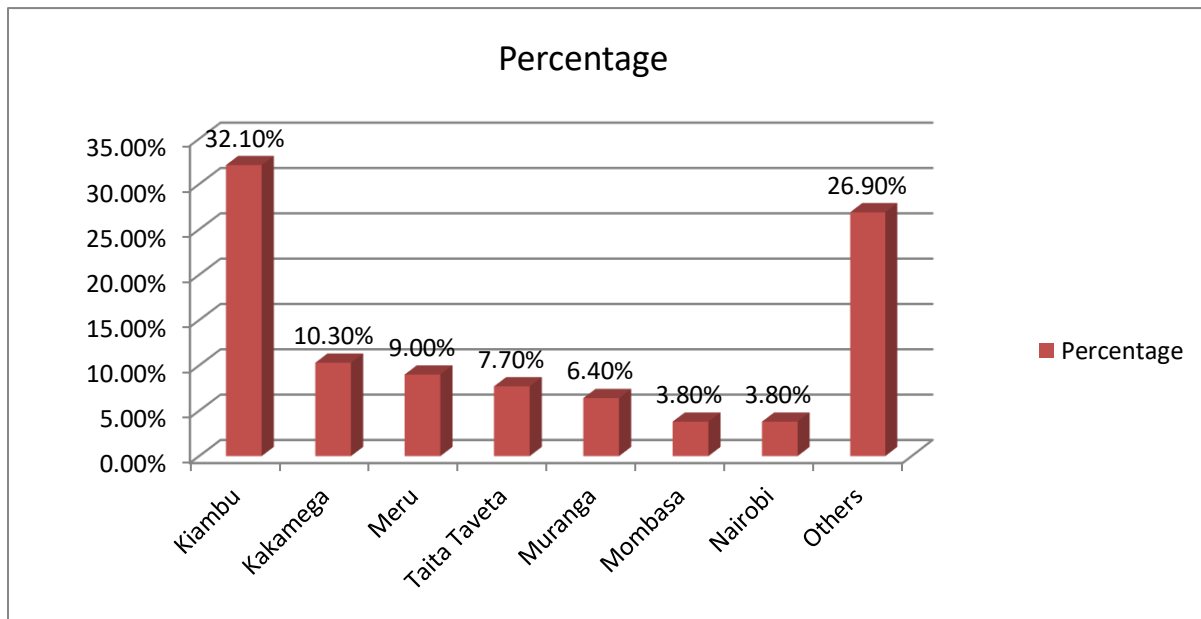
The author of YSR reported one week test-retest reliability of  $r=.68$  among 11 to 14 year-olds for the competency scales and  $r=.65$  for the problem scales ( $p<.05$ ) (Achenbach, 1991). For

criterion related validity, the author reports that the YSR’s quantitative scale scores and clinical cut points on the scale scored discriminated between referred and non-referred youth after controlling for demographic effects (Achenbach, 1991). For content validity, it was found that most YSR items were able to discriminate between referred and non-referred youth (Achenbach, 1991). The YSR is a well-known and widely used youth self-report of behaviour problems and social competence with sound psychometric properties.

**3.0 RESULTS AND DISCUSSION**

All the participants participated in the study from the beginning to the end except for seven who left due to absenteeism, home visit, as well as sickness as a result of which there was an attrition rate of 8.2%. All the respondents were female. The control and experimental groups were comparable with respect to key socio-demographic characteristics as well as dependent variables at baseline (Table 4.1). Internalizing behavioral problems were measured by depression and anxiety disorder, while externalizing behaviour problems were measured by conduct disorder. Characteristics of the study population are illustrated by Table 2.1

**Table 2.1 presents a comparison of the Kirigiti and Dagoretti Schools**



**Figure 4. 1: Distribution of Girls Incarcerated at Rehabilitation Centers per County (N=78)**

Figure 4.1 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, Makeni, Kirinyaga, and Nakuru counties.

According to Figure 4.1, 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 2.2: 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



	47.87% to 78.53%)	to 84.2%)
No	14/38 (36.8%; 95% CI: 21.47% to 52.13%)	12/40 (30.0%; 95% CI: 15.8% to 44.2%)

**Table 3.1: Comparison between Kirigiti and Dagoretti Groups in Terms of Behavioural Problems**

Conduct disorders	7.3784 (95% CI: 5.6996 - 9.0572)	-	7.2632 (95% CI: 6.0341 - 8.4923)	<b>0.003</b>
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According to Table 3.1, the age of the respondents in the two groups were comparable; 14.3 and 14.8 years respectively. Class mean in both groups was almost the same, at 5.73 in Kirigiti and 5.82 in the Dagoretti group. Standard six was the median class in both groups. Girls who came from disadvantaged socio-economic status in the Kirigiti and Dagoretti groups were 78.9 and 85% respectively. The majority of the girls came from single parent families, 63.2% in the Kirigiti group and 70% in the Dagoretti group. Half of the girls had dropped out of school prior to admission at rehabilitation schools, 63.2% in Kirigiti group and 55% in the Dagoretti group.

**Table 3.2: Bivariate Analysis between Key Socio-Demographic and Conduct Disorders in the Kirigiti and Dagoretti Groups.**

	Conduct Disorder	No Disorder	Chi-square	p-value
Religion				
Catholic	20/35 (57.1%)	15/35 (42.9%)	0.149	0.928
Protestant	19/36 (52.8%)	17/36 (47.2%)		
Islam	4/7 (57.1%)	3/7 (42.9%)		
Class				
Four	9/17 (52.9%)	8/17 (47.1%)	1.242	0.871
Five	7/14 (50.0%)	7/14 (50.0%)		
Six	7/13 (53.8%)	6/13 (46.2%)		
Seven	19/31 (61.3%)	12/31 (38.7%)		
Above Eight	1/3 (33.3%)	2/3 (66.7%)		
Age				

<14 years		3/9 (33.3%)	6/9 (66.7%)		
14 years		11/18 (61.1%)	7/18 (38.9%)		
15 years		12/24 (50.0%)	12/24 (50.0%)	5.652	0.227
16 years		15/21 (71.4%)	6/21 (28.6%)		
17 years		2/6 (33.3%)	4/6 (66.7%)		
Whom they you live with					
Extended Family		13/26 (50.0%)	13/26 (50.0%)	2.190	0.335
Guardian		7/9 (77.8%)	2/9 (22.2%)		
Nuclear Family		23/43 (53.5%)	20/43 (46.5%)		
Absence of One	Yes	23/39 (59.0%)	16/39 (41.0%)	0.466	0.495
or Both Parents	No	20/39 (51.3%)	19/39 (48.7%)		
Disadvantaged	Yes	35/64 (54.7%)	29/64 (45.3%)	0.028	0.867
family Social	No	8/14 (57.1%)	6/14 (42.9%)		
Economic Status					
Adolescent	Yes	24/42 (57.1%)	18/42 (42.9%)	0.149	0.699
Maltreatment	No	19/36 (52.8%)	17/36 (47.2%)		
Drugs/Alcohol	Yes	15/22 (68.2%)	7/22 (31.8%)	2.111	0.146
offence/abuse	No	28/56 (50.0%)	28/56 (50.0%)		
Divorced	Yes	18/26 (69.2%)	8/26 (30.8%)	3.136	0.077
Families	No	25/52 (48.1%)	27/52 (51.9%)		
Attention deficit	Yes	18/29 (62.1%)	11/29 (37.9%)	0.899	0.343
hyperactivity	No	25/49 (51.0%)	24/49 (49.0%)		
disorder					
Post-traumatic	Yes	8/13 (61.5%)	30/65 (46.2%)	0.259	0.611
Stress Disorder	No	35/65 (53.8%)	5/13 (38.5%)		

Table 3.2 indicates that respondents in class seven with conduct disorder were at 61.3% which was the highest as compared to other classes. Girls who were 16 years old with conduct disorder were 71.4%. Girls who stayed with guardians and had conduct disorder were at 77.8% as compared to those who did not at 22.2%.

Additionally the study suggests that the risk factors for adolescents in conflict with the law include poor socio-demographic status and psychological impacts of divorced parents. Negative peer group pressure was also a risk factor for incarcerated adolescents. These were in agreement with several studies which have found a consistent relationship between involvements in a delinquent behavior and socio-economic background. Granado and Gemma (2014) noted that for adolescents, a key predictor variable for delinquency is presence of antisocial peers. According

to Jongsma, (2006) factors such as peer delinquent behaviour and peer approval of delinquent behaviour are associated with adolescent antisocial behaviour. The influence of peers and their acceptance of delinquent behaviour is significant, and this relationship is magnified when adolescents have little interaction with their parents (Steinberg, 2013). Socio-demographic factors such as family size, child maltreatment and divorced families are risk factors linked to juvenile delinquency (Petot, 2011). Some research has also linked poor socio-economic status with increased delinquency (Olivia, 2013). Research points to a connection between adolescent mistreatment and participation in criminal acts (Ige, 2014). Sociological theories hypothesize that disorganized neighbourhood can cause Juvenile delinquency (Lewin, 1990).

The results of this study further reveal that adolescents coming from single parent families were more likely to have conduct disorder features. This finding is in agreement with several studies such as Mulatie (2014) who noted that children that come from single parent families will most likely have conduct disorder and a difficult time in life. According to Larfortune (2010), children from single parent families may experience depressive features. Larfortune explained that children coming from separated families can suffer from severe stress and depression. The children may also feel low self-esteem as if they were responsible for their parents' separation (Mulatie, 2014). According to Han et al. (2010) children from single parent families are nearly four times more likely to suffer depression than those whose parents stay together. This the present study is consistent with prior studies that youth from single parent families show a higher sign of delinquency than those from both parents families (Lewin, 1990).

Although additional research is critically needed, it is clear that factors such as socio- economic disadvantage, maltreatment and single parent families contribute to development of juvenile delinquency. Furthermore, conflict with parents and involvement with delinquent peers is a risk factor unique to girls. This suggests that the factors need to be addressed in efforts to understand and address girls' delinquency.

#### **4.0 CONCLUSION**

This study has shown that the majority of the adolescents in this study came from dysfunctional families where 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.

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