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The Prevalence of Conduct Disorder among Juvenile Delinquents in Selected Rehabilitation Schools in Kenya.

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Abstract

Previous studies on conduct disorder in rehabilitation schools have indicated high prevalence and this disorder is associated with criminal activities. Some underlying factors have been associated with the development of conduct disorder among juvenile delinquents. This study sought to establish the prevalence of conduct disorder among juvenile delinquents in rehabilitation schools. A total of 167 adolescents from two selected rehabilitation schools (Nairobi and Kirinyaga) participated in this cross-sectional study. A prevalence rate of 36.4% was found among the adolescents. In the aspect of marital status, the highest prevalence was among children who came from families where the parents were widowed (51.4%), whereas the prevalence among children from married or cohabiting parents was 34.0%. Children who were 17 years old had 52.5% prevalence of conduct disorder and the 16 year olds had 34.4% prevalence whereas, children who committed truancy had a prevalence rate of 64.0%. Significant associations were found between religiosity of parents, types of crime committed, marital status of parents and occurrence of conduct disorder. The prevalence of conduct disorder was high among juvenile delinquents in rehabilitation schools, which makes it a matter of major concern. Moreover, the association of conduct disorder with older adolescents is an issue that requires quick intervention before these children advance into serious criminal activities.
Key words: conduct disorder, juvenile delinquents, crime, adolescents, aggression, rehabilitation schools.

Introduction and Background

Conduct disorder is a persistent pattern of antisocial behavior where the person offends others through aggressive behaviors and other unacceptable acts in the society (The British Psychological Society and The Royal College of Psychiatrists, 2013). It is one of the most common disorders that affect children from early childhood and manifests mostly during school-going age and adolescence (Obsuth, Moretti, Holland, Braber, & Cross, 2006). Children with conduct disorder have difficulties with interpersonal relationships, emotional regulation and cognitive skills (Frick & Morris, 2004). Other difficulties such children portray include deficits in perceptions, interpretation of cues and processing of information (Frick, 2001; Kazdin, 2002). Additionally, children with conduct disorder often perceive their environment as hostile and hence respond with aggression to the people around them (Baker & Scarth, 2002; Ehrensaft,

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2005). Conduct disorder affects children of diverse socio-economic backgrounds and the prevalence of the disorder also varies from one population to another.

Surveys have shown estimates of conduct disorder prevalence between 4 and 9 percent in the general population. In the United States, a study that involved 3,199 respondents found 9.5% prevalence rate, while in India, the prevalence among 240 sampled school children was found to be 4.5% (Nock, Kazdin, Hiripi, & Kessler, 2006; Sarkhel, Sihna, Arora, & DeSarkar, 2006). Statistics have shown that conduct disorder is increasing and the prevalence rate is higher among boys compared to girls (Brestan & Eyberg, 1998; Ehrensaft, 2005).

Among juvenile delinquents, the prevalence of conduct disorder is higher compared to the normal population (Colins et al., 2010; Fazel, Doll, & Langstrom, 2008). For instance, a survey conducted among juvenile delinquents detained in Cook County, Illinois in the United States of America indicated a prevalence of 40% (Teplin, Abram, McClelland, Dulcan, & Mericle, 2002). Furthermore, a study done in Abeokuta Borstal Institution in Nigerian among 147 delinquents showed 56.5% prevalence of conduct disorder (Olashore, Ogunwale, & Adebowale, 2016). Also, in Kenya, previous studies have shown a high prevalence of conduct disorder among juvenile delinquents. The prevalence in Shimo La Tewa in Mombasa and Shikutsa in Kakamega rehabilitation centres was 30.4%, while in the Nairobi Juvenile Court it was 45% (Maru, Kathuku, & Ndetei, 2003; Okwara, 2013). Since the effects of conduct disorder affects the individual, family and the society, these high rates of prevalence remain a critical matter of concern. The individual suffers rejection, difficulties with interpersonal relationships and social skills, and poor academic performance (Greger-Moser, 2008; Frick & Morris, 2004; Pardini & Frick, 2013). At the family level, constant conflicts and disagreements, hostility and aggression are experienced as a result of having a child with conduct disorder (Banks & Zionts, 2009; Haugaard, 2008; Warner-Metzger & Riepe, 2013). The society suffers as well because children with conduct disorder will get involved in serious offences that cause harm to people, and engage in destruction, robbery, use of weapons, drugs and other criminal activities as they advance in years (Holmes, Slaughter, & Kashani, 2001; Mash & Wolfe, 2010). On the other hand, governments also incur heavy costs of running rehabilitation centres (Collishaw, Maughan, Goodman, & Pickles, 2004; Foster & Jones, 2005; Frick, 2004). These effects underscore the need to address conduct disorder as a matter of critical concern.

Although conduct disorder has no definite causal explanation, the existence of an interaction between genetic, family and social factors provides an impetus for its development (Baker & Scarth, 2002; Mash & Wolfe, 2010; Ojo, 2012; Omboto, Ondiek, Odera, & Ayugi, 2013). Studies have shown a relationship between family and social factors, and the occurrence of conduct disorder (Salehi, Noah, Baba, & Jaafar, 2013; Searight, Rottnek, & Abby, 2001; Stikkelbroek, Bodden, Reitz, Vollebergh, & Baar, 2016). The purpose of this study was to establish the prevalence of conduct disorder among juvenile delinquents and determine the association between socio-demographic factors and the risk of developing the disorder. Documenting these factors helps in addressing conduct disorder as a mental health issue and

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creates insights on the correlating factors. It is important for parents to appreciate the factors that predispose children to the chances of developing conduct disorder and strategize on ways of alleviating it.

Methodology

In this cross-sectional study design, 167 respondents aged between 13 and 17 years from Kabete and Wamumu rehabilitation schools in Kenya were enrolled. The schools were randomly selected from seven boys' rehabilitation schools in Kenya. Children admitted in these schools were serving jail terms for criminal offences, which included stealing, causing harm to people, running away from home, truancy (not attending school), assault, breaking into people's premises and being found in possession of drugs. All respondents voluntarily participated in the study.

Respondents in both schools had been given advance notice of the study and all the relevant information was provided before participation. The study recruited respondents who accented to participate and the school managers gave consent on behalf of parents. Participants were given self-administered questionnaires and minimal assistance was accorded by the researcher and research assistants when it was necessary. None of the participants opted out of the study and all the questionnaires were completed as required.

This study used questionnaires as instruments for collecting data. The first questionnaire, which was formulated by the researcher, captured socio-demographic information. Socio-demographic information included age, class, length of time at the school, offence committed, parents alive and their marital status. Other information included the number of siblings in their families, the persons they were living with before joining the schools, employment of parents or caregivers and religion of the children and parents.

Respondents were also given the Child Behavior Checklist Youth Self-Report for Ages 11-18 (2001).Youth-Self Report (YSR) is one of Achenbach System of Empirically Based Assessments (ASEBA), which was developed in 2001 by Achenbach (Achenbach & Rescorla, 2001). The questionnaire has 112 questions rated on a likert scale from 0 to 2. A zero (0) indicates "not true", a one (1) is "somewhat or sometime true" and a two (2) is "very true or often true". This standardized tool has been adapted in Kenya and translated into Kiswahili.

Child Behavior Checklist Youth Self-Report (11-18) is used to assess various syndrome scales, which include conduct disorder (Bordin et al., 2013). Conduct disorder has 13 items[1]: The Child Behavior Checklist Youth Self-Report (11-18) has a strong criterion-related validity

[11111]16. I am mean to others, 21. I destroy things belonging to others, 26. I don't feel guilty after doing something I shouldn't. 28. I break rules at home, school or elsewhere 37. I get in many fights. 39. I hang around with kids who get in trouble, 43. I lie or cheat, 57. I physically attack people. 73. I can work well with my hands. 82. I steal from places other than home. 90. I swear or use dirty language. 97. I threaten to hurt people. 101. I cut classes or skip school. The scores for this syndrome range from 0 to 26.

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(Bordin et al., 2013), which has been tested by various researchers. In a study that involved 673 children and adolescents to test the psychometric properties of the questionnaire, the results proved its validity since it was able to discriminate respondents with and without psychiatric disorders (Nakamura, Ebesutani, Bernstein, & Chorpita, 2009). Another study sampled 231 children between 7-14 years and the Youth Self-Report questionnaire was administered (Ebesutani, Bernstein, Martinez, Chorpita, & Weisz, 2011). The results showed that children were able to give reliable reports and the tool identified respondents who had various disorders, especially on externalizing scales like conduct disorder.

This study used a standardized tool to assess conduct disorder among the respondents. The Child Behavior Checklist Youth Self-Report (11-18) questionnaire is a standardized tool, which has been used to assess conduct disorder. YSR has a mean test-retest reliability of 0.82 for empirically-based syndromes and 0.79 for DSM-oriented scales (Bordin et al., 2013). In 2009, Kumar used the Youth Self-Report (11-18) in a research that aimed at assessing the impact of REBT on adolescents with conduct disorder in India (Kumar, 2009). The tool was able to identify 200 boys and girls with conduct disorder. In Kenya, the Child Behavior Checklist Youth Self-Report (11-18) Kiswahili version was used by Sisa-Kiptoo in Kirigiti Girls Rehabilitation School (Sisa-Kiptoo, 2014). The study focused on problem behavior among girls in the school and 60.8% presented with conduct disorder among other psychological problems.

Collected data was analyzed with the help of the Statistical Package for the Social Sciences (SPSS) Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp.2011) computer program using descriptive, bivariate and multivariate analysis. The prevalence was across the different characteristics such as school, age, class, religion, parents' marital status and offences committed. Pearson's chi-square test of independence analyzed statistical association observable in the conduct disorder results across demographic characteristics. This study also used logistic regression to determine the strength of association between socio-demographic characteristics and conduct disorder among respondents. The p-values$\leq$0.05 were considered statistically significant.

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Results

The univariate, bivariate and multivariate analysis of conduct disorder in relation to socio-demographic characteristics were done.

Table 1: The Prevalence of CD among Juvenile Delinquents at KRS and WRS

	Prevalence of CD (n, %)	95% CI
Conduct Disorder	61/167 (36.5%)	29.2% to 43.8%
Study Arm		
Wamumu school	37/91 (40.7%)	30.61% to 50.79%
Kabete school	24/76 (30.3%)	19.97% to 40.63%
Marital status of parent		
Married/Cohabiting	25/72 (34.7%)	23.7% to 45.7%
Separated/Divorced/Single	15/50 (30.0%)	17.3% to 42.7%
Widowed	18/35 (51.4%)	34.84% to 67.96%
N/A	3/10 (30.0%)	1.6% to 58.4%
Religion		
Christian	53/145 (36.6%)	28.76% to 44.44%
Muslim	7/20 (35.0%)	14.1% to 55.9%
Others[2]	1/2 (50.0%)	n/a
Offence committed		
Stealing	32/92 (34.8%)	25.07% to 44.53%
Defilement and Rape	6/28 (21.4%)	6.21% to 36.59%
Breaking in and Stealing	3/13 (23.1%)	0.19% to 46.01%
Truancy (out of School, loiter)	16/25 (64.0%)	45.18% to 82.82%
Others[3]	4/9 (44.4%)	n/a
Age		
<14 years	3/11 (27.3%)	0.97% to 53.63%
15years	13/47 (27.7%)	14.91% to 40.49%
16years	21/61 (34.4%)	22.48% to 46.32%
17years	21/40 (52.5%)	37.02% to 67.98%
Class		
Four	0/21 (0.0%)	n/a
Five	7/28 (25.0%)	8.96% to 41.04%
Six	16/37 (43.2%)	27.24% to 59.16%
Seven	19/41 (46.3%)	31.04% to 61.56%
Eight	19/40 (47.5%)	32.02% to 62.98%

[2] 'Not applicable and I don't know'
[3] Offences like 'found in possession of drugs, fake money or assault'.

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As shown in Table 1, the prevalence of conduct disorder was found to be at 36.5% (95% CI: 29.2% to 43.8%). Further analysis depicted the prevalence disaggregated by key socio-demographic characteristics. The study found that the prevalence of conduct disorder was highest (51.4%) among juvenile delinquents who came from families where the parents were widowed. Respondents who came from families where the parents were married or cohabiting recorded a prevalence of 34.7%, which was higher than the separated, divorced, or single families at 30.0%.

Considering the age of the respondents, 52.5% were 17 years old while 34.4% were 16 years old, 27.7% were 15 years old while 27.3% were 14 years and below. This observation demonstrated that the prevalence of conduct disorder was higher among the older respondents.

On offences committed, 64.0% of the respondents reported to have been truant while 34.8% had committed the offence of stealing. Respondents who committed the offence of breaking in and stealing formed 23.1% while the ones who committed defilement and rape had a prevalence of 21.4%. This suggested that the majority of the respondents with conduct disorder had dropped out of school.

The prevalence of conduct disorder in class eight was 47.5%, in class seven, it was at 46.3%, in class six, it was 43.2% while in class five, the prevalence was 25.0%. This showed that the prevalence of conduct disorder accelerated as respondents progressed in school. Moreover, class four respondents did not record conduct disorder.

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Table 2: Bivariate Analysis between Demographic Characteristics and Conduct Disorder (CD).

	No CD	CD	χ^2	p-value
Marital status of parent				
Married/Cohabiting	46/70 (65.7%)	24/70 (34.3%)		
Separated/Divorced/Single	36/52 (69.2%)	16/52 (30.8%)	2.245	0.1523
Widowed	17/35 (48.6%)	18/35 (51.4%)		
Others[4]	7/10 (70.0%)	3/10 (30.0%)		
Religion				
Christian	92/145 (63.4%)	53/145 (36.6%)		
Muslim	13/20 (65.0%)	7/20 (35.0%)	0.177	0.915
Others	1/ 2 (50.0%)	1/ 2 (50.0%)		
Class				
Four	21/21 (100.0%)	0/21 (0.0%)		
Five	21/28 (75.0%)	7/28 (25.0%)		
Six	21/37 (56.8%)	16/37 (43.2%)	18.190	0.001
Seven	22/41 (53.7%)	19/41 (46.3%)		
Eight	21/40 (52.5%)	19/40 (47.5%)		
Age				
<14 years	8/11 (72.7%)	3/11 (27.3%)		
15years	34/47 (72.3%)	13/47 (27.7)	6.522	0.089
16years	40/61 (65.6%)	21/61 (34.4%)		
17years	19/40 (47.5%)	21/40 (52.5%)		
Offence committed				
Stealing	60/92 (65.2%)	32/92 (34.8%)	12.480	0.014
Defilement and Rape	22/28 (78.6%)	6/28 (21.4%)		
Breaking and Stealing	10/13 (76.9%)	3/13 (23.1%)		

[4] Orphans or not sure of the marital status.

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Truancy	9/25 (36.0%)	16/25 (64.0%)		
Others	5/9 (55.5%)	4/9 (44.4%)		
Father attending worship				
No	27/49 (55.1%)	22/49 (44.9%)	3.178	0.075
Yes	28/38 (73.7%)	10/38 (26.3%)		
Mother attending worship				
No	12/29 (41.1%)	17/29 (58.6%)	8.163	0.004
Yes	81/116 (69.8%)	35/116 (30.2%)		
Guardian attending worship				
No	3/5 (60.0%)	2/5 (40.0%)	0.036	0.849
Yes	25/45 (55.6%)	20/45 (44.4%)		
Student attending worship				
Never	10/15 (66.7%)	5/15 (33.3%)		
Sometimes	63/103 (61.2%)	40/103 (38.8%)	0.620	0.734
Always	33/49 (67.3%)	16/49 (32.7%)		
Employed (Self/Formal)				
No	42/67 (62.7%)	25/67 (37.3%)	0.030	0.863
Yes	64/100 (64.0%)	36/100 (36.0%)		
Earn Income				
No	59/97 (60.8%)	38/97 (39.2%)	0.700	0.403
Yes	47/70 (67.1%)	23/70 (32.9%)		

According to the bivariate analyses in Table 2, class eight respondents reported the highest proportion of conduct disorder at 47.5%, class seven reported a prevalence of 46.3%, while class six had a prevalence of 43.2%. The increase in prevalence based on classes indicated a statistical association which was highly significant (p=0.001). This meant that the higher the class, the higher the proportion of juveniles with conduct disorder.

Additionally, 64.0% of the respondents were truant while 34.8% committed the offence of stealing. Respondents who had committed the offence of breaking in and stealing formed 23.1% while 21.4% committed defilement and rape. This showed a statistically significant (p=0.014) association between the offence and occurrence of conduct disorder. This study also found that 58.6% of juvenile delinquents reported that their mothers did not attend a place of worship while 30.2% reported that their mothers did. The difference between juveniles whose mothers attended a place of worship and those who did not indicated a highly significant

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difference (p=0.004). This signified that the prevalence of conduct disorder was highest among students whose mothers did not attend a place of worship[5]. Additionally, there was no significant difference between respondents who attended a place of worship always, sometimes or never did.

This study sought to find out associations between occurrence of conduct disorder and other socio-demographic characteristics. However, characteristics such as parents' marital status, religion[6], fathers or guardians or the respondents attending a place of worship, parents or guardians earning consistent incomes, and employment status of parents or guardians did not show any significant association with occurrence of conduct disorder among the study population.

Table 3: Multivariate Analysis between Key Socio-Demographic and CD.

	OR[7]	95% CI		p-value
Marital status of parent				
Married/Cohabiting	Referent			
Separated/Divorced/Single	0.502	0.221	1.142	0.100
Widowed	0.405	0.165	0.993	0.048
Religion				
Christian	Referent			
Muslim	0.576	0.035	9.401	0.699
Others	0.538	0.029	9.985	0.678
Class				
Four	Referent			
Six	0.368	0.128	1.060	0.064
Seven	0.842	0.343	2.069	0.708
Eight	0.955	0.399	2.285	0.917
Age				
<14 years	Referent			
15years	0.339	0.078	1.468	0.148
16years	0.346	0.142	0.843	0.020
17years	0.475	0.210	1.073	0.073
Offence committed				
Stealing	Referent			
Defilement and Rape	0.300	0.119	0.755	0.011

[5] This refers to actual attendance to any place of worship regardless of the religious affiliation
[6] This refers to religious affiliation namely Christian, Muslim and others
[7] Odds ratio

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Breaking in and Stealing	0.153	0.045	0.518	0.003
Truancy	0.450	0.096	2.115	0.312
Others	0.169	0.037	0.777	0.022
Father attending worship				
No	Referent			
Yes	2.281	0.913	5.699	0.077
Mother attending worship				
No	Referent			
Yes	3.279	1.417	7.584	0.006
Guardian attending worship				
No	Referent			
Yes	0.833	0.127	5.479	0.850
Student attending worship				
Never	Referent			
Sometimes	1.031	0.302	3.522	0.961
Always	1.310	0.640	2.681	0.461
Employed (Self/Formal)				
No	Referent			
Yes	1.058	0.557	2.010	0.863
Earn Income				
No	Referent			
Yes	1.316	0.691	2.506	0.403

In Table 3, multivariate analysis was used to show key socio-demographic factors and conduct disorder. Juvenile delinquents whose mothers were not attending a place of worship were three times more likely to have conduct disorder as compared to those who attended (OR= 3.279, 95% CI: 1.417 - 7.584; p=0.006). This showed that respondents whose mothers attended a place of worship were less likely to develop conduct disorder. This reinforces the finding that commitment to religion positively correlates with participants' low occurrence in conduct disorder.

Further analysis indicated that juvenile delinquents who committed the offence of breaking in and stealing were more likely to have conduct disorder as compared to those whose offence was stealing (OR=0.153, 95% CI: 0.045-0.518; p=0.003). This suggested that those respondents who reported to have committed the offence of breaking in and stealing were exposed to the risk of developing conduct disorder compared to those who committed the offence of stealing. In addition, respondents who reported to have committed the offence of defilement and rape were more likely to have conduct disorder compared to those who committed the offence of stealing (OR=0.300, 95% CI: 0.119-0.755; p=0.011). This meant that

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respondents whose offence was defilement and rape were more exposed to the risk of developing conduct disorder compared to the ones whose offence was stealing.

Respondents who were 16 years old had less chances of developing conduct disorder compared to respondents who were 14 years old and below (OR=0.346, 95% CI: 0.142-0.843; p=0.020). This demonstrated that the respondents who were 14 years and below had less chances of developing conduct disorder compared to 16 year old respondents.

Moreover, respondents who came from widowed families were more likely to have conduct disorder compared to those who came from families where the parents were married or cohabiting (OR=0.405, 95% CI: 0.165-0.993; p=0.048) (Table 3). This finding implied that respondents from widowed families were more exposed to the risk of developing conduct disorder.

Discussion

The objective of this study was to establish the prevalence of conduct disorder among juvenile delinquents in rehabilitation schools. Among the juvenile delinquents who participated in this study, the prevalence of conduct disorder was 36.5%. This percentage was high compared to the general population whose prevalence of conduct disorder was estimated at 9% (Mash & Wolfe, 2010; Nock et al., 2006). However, the high prevalence of conduct disorder in this study was in agreement with other studies done in juvenile institutions (Colins et al., 2010; Fazel et al., 2008; Olashore, Ogunwale & Adebowale, 2016;Teplin et al., 2002). In Kenya, studies have also shown almost a similar prevalence of conduct disorder in rehabilitation schools (Maru et al., 2003; Okwara, 2013). Children with conduct disorder lack cognitive skills, problem solving skills as well as emotional regulation skills; and also, portray aggressive behaviors (Frick, 2001; Frick & Morris, 2004; Kazdin, 2002). Such deficiencies are likely to expose them to criminal activities hence, end up in rehabilitation schools. The high prevalence is also explained by the fact that the study involved two boys' rehabilitation schools and the occurrence is supported by literature, which stipulates that conduct disorder is highly prevalent among boys (Haugaard, 2008; Humaida, 2012; Sarkhel et al., 2006).

This study established that 51.4% of the respondents came from families where the parent was widowed. Compared to other families, this category had the highest prevalence. This finding was consistent with other studies (Juby & Furrington, 2001; Raza, Adil, & Ghayas, 2008). The death of a parent, especially the mother has adverse effects and is strongly associated with delinquency among adolescents (Stikkelbroek et al., 2015). The psychosocial functioning of the adolescent is affected due to the emotional problems experienced like isolation, sadness, hopelessness which additionally lead to behavior problems. In instances where social support is lacking, the adolescent gradually begins to develop conduct disorder.

This study found that 52.5% of respondents with conduct disorder were 17 years old suggesting that the prevalence of conduct disorder increased among the older children. This

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finding supports other studies, which indicated that conduct disorder was commonly diagnosed at the adolescence age and the prevalence continues to increase with age (Lahey & Waldman**,** 1999; Murray & Farrington, 2010). Generally, adolescents seek freedom and autonomy as they negotiate the identity versus identity confusion stage (Santrock, 2008). Coupled with other factors such as ineffective discipline, lack of communication with parents and negative peer pressure, the risks of manifesting with problem behaviors increase (Sells, Early, & Smith, 2011).

According to the findings of this study, 66.7% of juvenile delinquents were truants. Truancy in this case denoted being rebellious, running away from home and not attending school. This finding is comparable to other studies that have shown a close association with delinquents influences an adolescent into delinquent activities (Ingram et al., 2007; Omboto et al., 2013). When children drop out of school, they join rebellious groups and miss out on parental care and guidance. Delinquents are usually rejected by peers due to their behavior and as a result, they alienate themselves and are attracted to other delinquents who accept them (Lahey & Waldman, 1999; Mash & Wolfe, 2010; Maru et al., 2003; Pardini & Frick, 2013; Scott, 2008). In such groups, adolescents get into more serious criminal activities such as stealing, robbery, assault and breaking into premises (Furrington & Murray, 2010). In the same vein, adolescents who had committed the offence of breaking in and stealing in this study had increased chances of having conduct disorder. In most cases, children will exhibit problem behaviors like telling lies, fighting and stealing petty items. Such behavior is not necessarily conduct disorder and is likely to diminish as the child develops. Exceptionally for some children, the problem behavior continues and as they advance in years, they present with increased aggression, drug abuse and other serious crimes (Pardini & Frick, 2013; Valle, Kelley, & Seoanes, 2001; Vanyukov et al., 1992). It therefore explains the increased chances of such adolescents manifesting with conduct disorder.

This study found no significant difference in prevalence among juvenile delinquents based on religion. Among Christians, there was a prevalence of 36.6% while among the Muslims, it was at 35.0%. This was contrary to a study, which indicated a low prevalence of conduct disorder among Muslim adolescents citing strict religious teachings as a protective factor (Humaida, 2012). However, this finding suggested that adolescents were exposed to similar risk factors of developing conduct disorder regardless of their religion. Factors that expose children to the risks of developing conduct disorder such as domestic violence, neglect by parents or caregivers or drug abuse can impact any child.

Respondents who had their mothers not attending a place of worship like a church or mosque had a higher prevalence of conduct disorder at 58.6% compared to only 30.2% whose mothers did. The difference was statistically significant p=0.006. In addition, respondents whose mothers did not attend a place of worship were three times more likely to develop conduct disorder. This finding was comparable to other studies, which indicated a decrease in conduct disorder among adolescents where the parents had a religious affiliation (Pearce, Jones, Schwab-Stone, & Ruchin, 2003). Other studies have shown that religiosity of a parent can protect

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adolescents from developing conduct disorder (Kim, McCulluogh, & Cicchetti, 2009). This finding suggested that parenting that is based on religious values can serve as a protective factor against delinquent activities (Schreiber, 2010). Moreover, this study did not show any association between a child's religiosity and conduct disorder. This is contrary to previous studies which stipulated that a child's religiosity reduces the risks of conduct disorder occurrence (Meltzer, Dogra, Vostanis & Ford, 2011).

In this study, there was no association between parents' employment, parents or guardians earning consistent income and conduct disorder. On the contrary, other studies showed a strong association between low income and occurrence of problem behavior (Lahey & Waldman, 1999; Omboto, 2013). This study did not however, focus on assessing the socio-conomic status of respondents. Nevertheless, lack of parents' employment and inconsistent income had no direct link with conduct disorder. Other contributing factors such as family conflicts and alcohol and drug use among parents or aregivers may have overshadowed the income factor.

This study did not consider age of conduct disorder onset so the limitation was that children who met the criteria were not categorized into childhood or adolescent onset. Such information would have helped to know the percentages of prevalence per category. Nevertheless, the study showed an increase in the prevalence among older adolescents. Regarding offences committed by the juvenile delinquents, this study did not capture the number of times an offence was committed. However, the type of offence indicated higher odds in relation to occurrence of conduct disorder. Moreover, the socio demographic questionnaire was in English and some respondents required assistance in understanding the questions. Additionally, this study relied entirely on the respondents' feedback and lacked parents' contribution. Information from parents concerning their children's behavior would have been a rich contribution to this study.

Conclusion

The results of this study provide knowledge about the high prevalence of conduct disorder among juvenile delinquents in rehabilitation schools. This contributes to additional insight into the field of psychology on the high prevalence of conduct disorder among children who are truant, and also among the ones who have experienced the death of one parent. On the other hand, parents' religiosity is a protective factor against the occurrence of conduct disorder. This study established a low prevalence of conduct disorder among children in rehabilitation schools whose mothers attend a place of worship regardless of the religion.

The high prevalence of conduct disorder in rehabilitation schools requires urgent attention. It is evident that children who manifest with truant behavior are likely to present with conduct disorder. This study recommends an integrated rehabilitation program for juveniles which will include psychotherapy that targets the cognitive, behavioral and emotional aspects of an adolescent. The intervention will help to reform juvenile delinquents to avoid the transition

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into more serious criminal activities. Moreover, future studies could focus on the relationship between conduct disorder and the social economic status of parents or guardians.

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