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Prevalence of Clinically Significant Conduct Disorder Symptoms among Adolescents in Public Secondary Schools in Ruiru Sub-County, Kenya: A School-Based Screening Study

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ABSTRACT

Conduct disorder (CD) is a persistent pattern of behaviour in which the basic rights of others or major age-appropriate societal norms are violated, and it disrupts adolescents' learning, relationships and later adjustment. Although indiscipline and aggression have been documented in secondary schools in Ruiru Sub-County, Kenya, no estimate of the prevalence of CD symptoms in the sub-county was available. This study determined the prevalence of clinically significant CD symptoms among adolescents in two public secondary schools in Ruiru Sub-County, Kiambu County. The study was anchored in the positivist paradigm and used a quantitative, cross-sectional descriptive design. All 481 Form Three and Form Four students in the two schools were targeted in a census screening, and 404 (84.0%) were rated on the Conduct Disorder Scale (CDS) by school staff who knew them well. A Conduct Disorder Quotient (CDQ) of 85 or above was taken to indicate clinically significant symptoms. Data were analysed using SPSS version 29. Of the 404 adolescents, 276 (68.3%) scored in the unlikely range, 19 (4.7%) in the mild range, 101 (25.0%) in the moderate range and 8 (2.0%) in the severe range. Overall, 109 adolescents (27.0%, 95% CI [22.7%, 31.3%]) had clinically significant CD symptoms, and the proportion differed between the two schools (34.3% and 23.2%), $\chi^2(1, N = 404) = 5.65$, $p = .017$. More than one in four adolescents therefore showed clinically significant conduct problems. The study recommends routine behavioural screening in secondary schools, supported by clear referral pathways and school-based psychological support, so that persistent conduct problems are not addressed solely as indiscipline.

KEYWORDS: *conduct disorder, prevalence, adolescents, school-based screening, secondary schools, Kenya.*

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Adolescence is the developmental period between childhood and adulthood, marked by rapid biological, cognitive, emotional and social change and by increased vulnerability to emotional and behavioural difficulties (Frick & Kemp, 2021). Among the most serious of these difficulties is conduct disorder (CD), a repetitive and persistent pattern of behaviour in which the basic rights of others or major age-appropriate societal norms are violated (American Psychiatric Association, 2022). Its core behaviours include aggression towards people and animals, destruction of property, deceitfulness or theft and serious violations of rules (Junewicz & Billick, 2020). CD frequently co-occurs with attention-deficit/hyperactivity disorder, depression and substance use, and it is associated with educational underachievement, social exclusion, contact with the criminal justice system and poorer adult outcomes (Chan et al., 2023; Erskine et al., 2016; Salvatore & Dick, 2018). Its early identification is therefore important for adolescents, families, schools and society.

Four related terms are distinguished in this article. Conduct problems refer broadly to antisocial or rule-breaking behaviours, such as aggression, defiance and truancy, which may occur without a mental disorder.

Conduct disorder refers to the clinical diagnosis defined in the DSM-5-TR, which requires a persistent pattern of such behaviours and is established through clinical assessment (American Psychiatric Association, 2022). Conduct disorder symptoms are the specific behaviours that make up the diagnostic criteria, and in this study, they were measured with the Conduct Disorder Scale (CDS; Gilliam, 2002). Adolescents who scored at or above the CDS clinical cut-off are described as screening positive for clinically significant CD symptoms (probable CD); no clinical diagnosis was made.

Background to the Study

The reported prevalence of CD varies considerably across regions, populations and methods of assessment. An umbrella review of seven meta-analyses, covering 138 primary studies, placed the pooled global prevalence among children and adolescents at 3.0% and found that boys were 2.6 times more likely than girls to be affected (Ayano et al., 2024). A meta-analysis by Mohammadi et al. (2021), which included studies that used screening questionnaires, estimated a higher global prevalence of about 8% (95% CI [7%, 9%]), with 11% among males and 7% among females. In Europe, Kovess-Masfety et al. (2016) identified conduct problems in 8.4% of children aged 6–11 years across seven countries using the parent-report Strengths and Difficulties Questionnaire, whereas a national survey in Iran that used a structured diagnostic interview reported a prevalence of only 0.78% (Salmanian et al., 2020).

In Sub-Saharan Africa, a meta-analysis of 63 studies with 55,071 participants from 14 countries found a pooled prevalence of 9.76% for CD among youth, with considerable heterogeneity across studies (Jakobsson et al., 2024). In Nigeria, Ojuope and Ekundayo (2020) reported a prevalence of 14.5% among secondary school students aged 11–19 years. In Kenya, Gitonga et al. (2017) reported a prevalence of 31.4% among 611 secondary school students in Nairobi County, with higher rates among males (36.5%) than females (26.7%). Higher rates have been reported in clinical and correctional settings: 36.4% among adolescents in rehabilitation schools (James & Munene, 2017) and 37.6% among adolescents attending the Youth Centre at Kenyatta National Hospital (Pessah, 2023). Among Kenyan youths at high risk of psychosis, Ndetei et al. (2023) found that DSM-5 CD symptoms were common and frequently co-occurred with other mental disorders and substance use.

Taken together, these estimates show that the reported prevalence of CD depends strongly on who is studied and how CD is measured. Studies using structured diagnostic interviews in community samples report low rates of about 1% to 3% (Ayano et al., 2024; Salmanian et al., 2020), studies using screening questionnaires or rating scales report higher rates, and studies of clinical, correctional or rehabilitation samples report the highest rates, often above 30% (James & Munene, 2017; Pessah, 2023). Kenyan school-based estimates obtained with rating scales, such as the 31.4% reported in Nairobi secondary schools (Gitonga et al., 2017), are therefore not directly comparable with global diagnostic estimates, but they consistently indicate that a substantial minority of Kenyan adolescents show elevated conduct problems.

Ruiru Sub-County, about 20 kilometres north-east of Nairobi, has experienced rapid urban and industrial growth, accompanied by socioeconomic diversity and pressures on family life (County Government of Kiambu, 2023). Indiscipline has been documented as a persistent concern in its schools. Gekonde (2011) identified truancy, theft, disobedience, fighting, substance use, examination cheating, bullying and sneaking out of school among the forms of indiscipline in secondary schools in the then Ruiru District, and Njoroge and Nyabuto (2014) reported continuing indiscipline in Ruiru's public day secondary schools, linked to peer pressure, drug abuse, weak teacher–student relationships and inadequate guidance and counselling. More recently, Njeri (2022) reported high levels of hostility, anger and verbal aggression among 201 students in two public secondary schools in the sub-county, and Gicharu (2024) found that 24% of 424 adolescents in three of its secondary schools lashed out when angry. These studies document indiscipline and aggression rather than CD itself, and none has estimated the prevalence of CD symptoms in the sub-county.

Statement of the Problem

Conduct disorder in adolescents is increasingly recognised as a major public health issue, with substantial effects on academic achievement, interpersonal relationships and future mental health (Fairchild et al., 2019). It ranks among the most prevalent psychiatric disorders of childhood and adolescence (Ayano et al., 2024), and Kenyan studies have reported high rates of CD symptoms among adolescents in schools, clinics and rehabilitation settings (Gitonga et al., 2017; James & Munene, 2017; Pessah, 2023). In Ruiru Sub-County, persistent truancy, aggression, defiance and verbal hostility have been documented among secondary school students (Gekonde, 2011; Gicharu, 2024; Njeri, 2022; Njoroge & Nyabuto, 2014), behaviours that overlap

with the diagnostic indicators of CD (American Psychiatric Association, 2022). When such behaviour is handled only as indiscipline, adolescents whose conduct problems are persistent and clinically significant may not be identified for psychological assessment and support.

What was not known was the proportion of secondary school students in Ruiru Sub-County who show clinically significant CD symptoms. Without such an estimate, schools and education and health authorities lack the local evidence needed to plan screening, referral and school-based psychological services. The present study addressed this gap by establishing the prevalence of clinically significant CD symptoms among adolescents in two public secondary schools in the sub-county.

Objective and Research Question

The objective of the study was to determine the prevalence of clinically significant conduct disorder symptoms among adolescents in selected secondary schools in Ruiru Sub-County, Kiambu County, Kenya. The study answered the research question: What is the prevalence of clinically significant conduct disorder symptoms among adolescents in selected secondary schools in Ruiru Sub-County, Kiambu County, Kenya?

Theoretical Framework

The study was guided by social learning theory (Bandura, 1977), which holds that behaviour is acquired not only through its direct consequences but also by observing and imitating others. Bandura's Bobo doll experiment showed that children who observed an adult model behaving aggressively towards an inflatable doll later behaved more aggressively than children who had observed a non-aggressive model or no model, particularly when the observed aggression went unpunished (Bandura et al., 1961). Social learning occurs through four processes: attention to the model, retention of what was observed, reproduction of the behaviour and motivation to perform it, the last of which depends on the reinforcement or punishment that the model and the observer receive (Bandura, 1977).

Applied to CD, social learning theory suggests that adolescents may acquire aggressive, antisocial and rule-violating behaviour by observing parents, siblings, peers, teachers and media figures, especially when such behaviour is rewarded or goes unpunished (Akers & Jennings, 2015; Bandura, 1977). Harsh or inconsistent discipline at home can model aggression as a way of resolving conflict, and affiliation with deviant peers can reinforce rule-breaking, whereas exposure to prosocial models and consistent reinforcement of appropriate behaviour support adaptive behaviour (Bandura, 1986). The theory therefore implies that the prevalence of conduct problems will differ across settings according to the models and reinforcement contingencies to which adolescents are exposed. It is relevant to rapidly urbanising settings such as Ruiru Sub-County, where changing family structures, economic pressures and peer influence may increase adolescents' exposure to aggressive models and reduce consistent supervision.

Empirical Literature Review

Ayano et al. (2024) conducted an umbrella review of meta-analyses on the global prevalence of CD among children and adolescents, registered with PROSPERO and quality-assessed with the AMSTAR tool. Across seven meta-analyses, encompassing 138 primary studies and more than 48 million participants, the pooled prevalence was 3.0% (95% CI [2.0%, 5.0%]), and boys were 2.6 times more likely than girls to be affected. The review provided a robust global estimate but did not examine the contextual factors, such as school and family environments, that shape the manifestation of CD in particular settings.

Mohammadi et al. (2021) reviewed cross-sectional studies of children and adolescents under 18 years in general and school-based populations and reported a pooled prevalence of 8% (95% CI [7%, 9%]), with 7% among females and 11% among males, but with very high heterogeneity (I^2 = 99.77%). Subgroup analysis showed that the measurement tool contributed substantially to this heterogeneity: studies that used structured diagnostic interviews, such as the K-SADS-PL and the Development and Well-Being Assessment, reported pooled rates below 1%, whereas studies that used screening questionnaires reported rates of 10% or more. Similarly, Bachmann et al. (2024), using health-care records from Denmark, Germany, Norway and the United States, found that the diagnosed prevalence of CD ranged from 0.1% to 3.1%, with a male-to-female ratio of about 2.0–2.5:1. Diagnosed and administrative rates therefore represent only the adolescents who reach services, and they are much lower than the rates of elevated symptoms identified by screening. Wu et al. (2022), analysing Global Burden of Disease data from 1990 to 2019, reported a modest global increase in age-standardised prevalence rates of CD, with a relatively larger increase among females.

In the Middle East, a review of studies found rates ranging from 3.3% to 34.6% among males and from 1% to 29.9% among females (Salmanian et al., 2017), whereas a national survey of 29,739 Iranian children and adolescents that used the K-SADS-PL reported a lifetime prevalence of 0.78% (Salmanian et al., 2020). In Nigeria, Ojuope and Ekundayo (2020) used the

CDS with secondary school students aged 11–19 years in Ondo State and reported a prevalence of 14.5%.

In Kenya, Gitonga et al. (2017) examined the prevalence of CD among adolescents in two sub-county mixed secondary schools in Nairobi County using a cross-sectional design. Of a population of 840 students, 611 were selected by cluster and purposive sampling and assessed with a sociodemographic questionnaire and the CDS. The overall prevalence was 31.4%, with rates of 34.7% (69 of 199 students) and 29.9% (123 of 412 students) in the two schools; the prevalence was higher among males than females (p = .009) and increased with age (p = .008), and cases were classified as mild (17.8%), moderate (8.7%) and severe (4.9%). Ndetei et al. (2023) screened 9,742 high school, college and university students in Kenya and assessed 536 who were at high risk of psychosis with the Diagnostic Interview Schedule; 5% met DSM-5 criteria for CD and a further 10.1% were classified as indeterminate, and CD was associated with male gender, substance use and several other mental disorders. In correctional and clinical settings, James and Munene (2017) reported a prevalence of 36.4% among juvenile delinquents in rehabilitation schools, Moracha et al. (2021) found that CD among young offenders at Shikusa Borstal Institution was influenced by peer relationships, the family environment and individual behavioural patterns, and Pessah (2023) reported CD symptoms in 37.6% of adolescents attending the Youth Centre at Kenyatta National Hospital.

These studies show that prevalence estimates depend heavily on the case definition and the instrument. Structured diagnostic interviews yield low estimates, screening questionnaires and rating scales yield estimates of 10% or more, and correctional or clinical samples yield the highest rates. Kenyan school-based estimates obtained with the CDS, at around 31%, are therefore comparable with one another but not with interview-based global figures. No study had estimated the prevalence of CD symptoms among secondary school students in peri-urban settings such as Ruiru Sub-County, and none had obtained ratings from school staff who observe the students daily. The present study addressed this gap.

Methodology

Research Philosophy and Design

This study was anchored in the positivist research paradigm, which holds that reality is objective and can be observed, measured and quantified through systematic and empirical methods. Within this paradigm, the researcher adopts a neutral stance and relies on standardised instruments and statistical procedures to generate findings that are replicable (Ayiro, 2024; Creswell & Creswell, 2018). Positivism supported the translation of CD symptoms into a measurable variable using a standardised rating scale with established norms.

A quantitative, cross-sectional descriptive design was used. The data were collected in a census screening of all eligible students in two schools, which formed the baseline phase of a larger quasi-experimental study that evaluated a combined cognitive restructuring and social skills training intervention for adolescents who screened positive. The findings of the intervention phase are reported separately.

Study Setting and Population

The study was conducted in Ruiru Sub-County, Kiambu County, Kenya. In January 2026, the ten public secondary schools in the sub-county had a total enrolment of 4,034 students. Following the transition from the 8-4-4 system to Competency-Based Education, Form One and Form Two classes no longer existed in these schools, and the remaining students were either Form Three and Form Four students, in the final two years of the 8-4-4 system, or Grade 10 learners admitted under the new curriculum. Only Form Three and Form Four students, aged approximately 15 to 19 years, formed the population of the study.

Two public mixed day secondary schools, referred to here as School A and School B, were purposively selected because they are comparable in type, serve students from varied socioeconomic backgrounds in the same sub-county and were logistically accessible. School A had a total enrolment of 203 students, of whom 146 were in Form Three and Form Four, and School B had 530 students, of whom 335 were in Form Three and Form Four. The target population therefore comprised 481 Form Three and Form Four students.

Sampling Procedure

A multistage procedure was used. In the first stage, Ruiru Sub-County was purposively selected because of its rapid urbanisation, sociodemographic diversity and documented concerns about student indiscipline (Gekonde, 2011; Gicharu, 2024; Njeri, 2022; Njoroge & Nyabuto, 2014). In the second stage, the two schools were purposively selected as described above. In the third stage, a census approach was adopted: all 481 Form Three and Form Four students in the two schools were targeted for screening, which avoided sampling error at this stage. Students were eligible if they had been enrolled in their school for at least six months and had parental or guardian consent and had given their own assent.

Measurement Instrument

CD symptoms were measured with the Conduct Disorder Scale (CDS; Gilliam, 2002), a standardised 40-item rating scale for individuals aged 5 to 22 years that is keyed to the DSM-IV criteria for CD. Items are rated on a four-point scale from 0 (*never observed*) to 3 (*frequently observed*) and form four subscales: Aggressive Conduct, Hostility, Deceitfulness/Theft and Rule Violations. Raw scores are converted to standard scores (M = 100, SD = 15), and the total standard score, the Conduct Disorder Quotient (CDQ), indicates the probability that the individual has CD (Table 1). The core diagnostic criteria for CD were carried forward into the DSM-5-TR largely unchanged; the main addition, the "with limited prosocial emotions" specifier, is not assessed by the CDS (American Psychiatric Association, 2022).

The CDS is designed to be completed by adults who know the young person well (Gilliam, 2002). In this study, it was completed for each student by school staff who knew the students well, namely the deputy principal, the disciplinary master, the head of guidance and counselling and the class teachers. Adolescents with a CDQ of 85 or above (the moderate and severe ranges) were considered to show clinically significant CD symptoms. Scores of 70–84 indicate mild symptoms and were not treated as clinically significant. Because the CDS is a rating instrument rather than a diagnostic interview, this classification indicates probable CD and not a clinical diagnosis.

Table 1 Interpretation of Conduct Disorder Quotient Scores

CDQ	Degree of severity	Probability of CD
100 and above	Severe	Highly probable
85–99	Moderate	Probable
70–84	Mild	Likely
69 and below	Not applicable	Unlikely

Note. CDQ = Conduct Disorder Quotient. Adapted from Gilliam (2002). In this study, a CDQ of 85 or above was taken to indicate clinically significant CD symptoms.

The CDS has high internal consistency in its standardisation sample, with an overall Cronbach's alpha of about .96 and subscale coefficients of .94 for Aggressive Conduct, .91 for Hostility, .79 for Deceitfulness/Theft and .74 for Rule Violations (Gilliam, 2002). Before the main study, the CDS was pretested with nine adolescents in a public secondary school in the sub-county that did not take part in the study. Cronbach's alpha was .84, and ratings obtained two weeks apart correlated at r = .82, indicating good internal consistency and stability. Because only the CDQ standard scores were entered in the main dataset, internal consistency could not be computed for the main sample.

Data Collection Procedure

After ethical approval and a research licence had been obtained, permission was sought from the Kiambu County and Ruiru Sub-County Education Offices and from the principals of the two schools. Parental consent and student assent forms were issued on 10 March 2026, and the screening was conducted on 16 March 2026. On the screening day, the school staff completed the CDS for every Form Three and Form Four student present. Completed forms were checked for completeness, coded and entered into SPSS version 29.

Data Analysis

The prevalence of clinically significant CD symptoms was computed as the percentage of screened students with a CDQ of 85 or above, with a 95% confidence interval based on the normal approximation. The distribution of students across the four CDQ bands was summarised with frequencies and percentages, and the proportions screening positive in the two schools were compared with the chi-square test of independence. The significance level was set at α = .05 (two-tailed).

Ethical Considerations

The study was approved by the Daystar University Institutional Scientific and Ethical Review Committee, and a research licence was issued by the National Commission for Science, Technology and Innovation. Written informed consent was obtained from parents or guardians and written assent from the students. Each student was assigned a unique code; names were kept on a separate list held by the researcher, and no names appear in the dataset. Screening results were kept confidential to the staff involved in the ratings and were not disclosed to other teachers or to peers, and the schools are not named in this article. Adolescents who screened positive were either enrolled in the intervention phase of the larger study or referred confidentially to their school's guidance and counselling department, and a safeguarding protocol consistent with the Children Act, 2022 (Republic of Kenya, 2022) was followed.

Results

Response Rate

Of the 481 students in the target population, 404 were screened, a response rate of 84.0% (Table 2). Coverage was higher in School A (93.8%) than in School B (79.7%). The 77 students who were not screened were absent from school on the screening day.

Table 2 Target Population and Screening Coverage by School

School	Target population	Screened	Response rate (%)
School A	146	137	93.8
School B	335	267	79.7
Total	481	404	84.0

Note. Target population data from the Ruiru Sub-County Education Office (January 2026).

Prevalence of Clinically Significant Conduct Disorder Symptoms

Table 3 presents the distribution of the 404 screened adolescents across the four CDQ bands. Most adolescents, 276 (68.3%), scored 69 or below, indicating that CD was unlikely. A further 19 (4.7%) scored in the mild range, 101 (25.0%) in the moderate range and 8 (2.0%) in the severe range.

Table 3 Distribution of Adolescents by Conduct Disorder Severity

Degree of severity	CDQ	*n*	%
Unlikely	69 and below	276	68.3
Mild	70–84	19	4.7
Moderate	85–99	101	25.0
Severe	100 and above	8	2.0
Total		404	100.0

Note. $N = 404$. CDQ = Conduct Disorder Quotient.

Overall, 109 of the 404 adolescents (27.0%, 95% CI [22.7%, 31.3%]) had a CDQ of 85 or above, indicating clinically significant CD symptoms. As Table 4 shows, the proportion was higher in School A (34.3%) than in School B (23.2%), and the difference was statistically significant, $\chi^2(1, N = 404) = 5.65$, $p = .017$. Because the CDS is a screening instrument and no diagnostic interview was conducted, this figure represents the prevalence of clinically significant CD symptoms (probable CD) rather than of diagnosed CD.

Table 4 Prevalence of Clinically Significant Conduct Disorder Symptoms by School

School	Screened	CDQ ≥ 85 (*n*)	%	95% CI
School A	137	47	34.3	[26.4, 42.3]
School B	267	62	23.2	[18.2, 28.3]
Total	404	109	27.0	[22.7, 31.3]

Note. CDQ = Conduct Disorder Quotient; CI = confidence interval. $\chi^2(1, N = 404) = 5.65$, $p = .017$.

Discussion

The study found that 27.0% of the adolescents screened in two public secondary schools in Ruiru Sub-County had clinically significant CD symptoms. Most of these adolescents scored in the moderate range, and only 2.0% of all screened adolescents scored in the severe range. This figure is much higher than the pooled global estimate of about 3% (Ayano et al., 2024). The difference is largely methodological: global estimates are based mainly on structured diagnostic interviews that require impairment and the full diagnostic criteria, whereas the present estimate is based on a standardised rating scale with a normative cut-off, which identifies adolescents with elevated symptoms rather than diagnosed cases. Mohammadi et al. (2021) similarly showed that screening instruments yield prevalence estimates many times higher than diagnostic interviews.

The finding is, however, consistent with other Kenyan studies that used rating scales. Gitonga et al. (2017), who also used the CDS, reported a prevalence of 31.4% among secondary school students in Nairobi County. Their overall figure appears to include the mild range (17.8% + 8.7% + 4.9% = 31.4%); when the mild range is included in the present data, the corresponding figure is 31.7% (128 of 404), which is almost identical. The present study applied a stricter threshold, counting only moderate and severe scores as clinically significant. The findings are also in line with the high rates reported among adolescents in clinical and rehabilitation settings in Kenya (James & Munene, 2017; Pessah, 2023). Together, these studies suggest that elevated conduct problems are common among Kenyan adolescents in urban and peri-urban settings, which is consistent with the persistent indiscipline and aggression documented in Ruiru

schools (Gekonde, 2011; Gicharu, 2024; Njeri, 2022; Njoroge & Nyabuto, 2014).

The prevalence differed significantly between the two schools, as did the rates in the two schools studied by Gitonga et al. (2017). The difference may reflect differences between the schools' settings and student populations, or differences between the staff who completed the ratings, but these factors were not examined directly. From the perspective of social learning theory, such variation is expected, because the aggressive models and reinforcement contingencies to which adolescents are exposed differ across homes, peer groups and neighbourhoods (Bandura, 1977).

Even though most adolescents who screened positive were in the moderate range, the finding that more than one in four adolescents showed clinically significant conduct problems indicates a substantial need for screening and support in these schools, given that CD is associated with persistent difficulties in social, educational and family functioning and with poor adult outcomes (Erskine et al., 2016; Fairchild et al., 2019).

Limitations

The findings should be interpreted in light of several limitations. First, the CDS is a rating scale, so the results indicate probable CD rather than diagnosed CD; a structured diagnostic interview would be required to confirm diagnoses. Second, each student was rated by school staff only, and the ratings of parents or the adolescents themselves may differ. Third, the 77 students who were absent on the screening day may have included some with conduct problems such as truancy, so the prevalence estimate may be conservative. Fourth, gender and age were recorded only for the adolescents enrolled in the later intervention phase, so prevalence could not be computed separately for boys and girls or by age. Fifth, the CDS has not been formally validated for Kenyan adolescents, and the two schools were purposively selected, which limits generalisation to other schools in the sub-county and beyond.

Conclusion

The study concludes that clinically significant conduct problems affect more than one in four adolescents in the selected secondary schools in Ruiru Sub-County, which constitutes an important behavioural and mental health concern. Although most students were unlikely to have CD, a considerable proportion showed moderate or severe symptoms that warrant further assessment and support. The findings demonstrate the need for early identification and psychosocial support within secondary schools.

Recommendations

School principals and guidance and counselling departments should strengthen early identification of adolescents with persistent conduct-related difficulties. Routine behavioural screening, supported by clear and functional referral mechanisms, could facilitate early detection and intervention before such difficulties escalate. Schools should recognise that persistent and clinically significant conduct-related difficulties may reflect underlying psychological and behavioural needs that require assessment and therapeutic intervention, rather than being addressed solely as matters of indiscipline, because treating such difficulties exclusively as disciplinary problems may delay access to appropriate psychological support.

The Ministry of Education, working with the Ministry of Health, should consider guidelines for behavioural screening and referral in secondary schools and should strengthen the capacity of guidance and counselling departments to support adolescents who screen positive. Future research should confirm screening results with structured diagnostic interviews, use multiple informants, report prevalence by gender and age, and include a larger and randomly selected sample of schools in Ruiru Sub-County and other peri-urban settings.

References

[1] Akers, R. L., & Jennings, W. G. (2015). Social learning theory. In A. R. Piquero (Ed.), *The handbook of criminological theory* (pp. 230–240). John Wiley & Sons. https://doi.org/10.1002/9781118512449.ch12

[2] American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). https://doi.org/10.1176/appi.books.9780890425787

[3] Ayano, G., Abraha, M., Tsegay, L., & Gizachew, Y. (2024). Umbrella review of the global prevalence of conduct disorder in children and adolescents. *The Psychiatric Quarterly*, *95*(1), 173–183. https://doi.org/10.1007/s11126-023-10060-9

[4] Ayiro, L. P. (2024). *Research paradigms and methodology in social sciences*. Academic Press.

[5] Bachmann, C. J., Scholle, O., Bliddal, M., dosReis, S., Odsbu, I., Skurtveit, S., Wesselhoeft, R., Vivirito, A., Zhang, C., & Scott, S. (2024). Recognition and management of children and adolescents with conduct disorder: A real-world data study from four Western countries. *Child and Adolescent*

Psychiatry and Mental Health, *18*(1), Article 18. https://doi.org/10.1186/s13034-024-00710-6

[6] Bandura, A. (1977). *Social learning theory*. Prentice-Hall.

[7] Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.

[8] Bandura, A., Ross, D., & Ross, S. A. (1961). Transmission of aggression through imitation of aggressive models. *The Journal of Abnormal and Social Psychology*, *63*(3), 575–582. https://doi.org/10.1037/h0045925

[9] Chan, L., Simmons, C., Tillem, S., Conley, M., Brazil, I. A., & Baskin-Sommers, A. (2023). Classifying conduct disorder using a biopsychosocial model and machine learning method. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, *8*(6), 599–608. https://doi.org/10.1016/j.bpsc.2022.02.004

[10] County Government of Kiambu. (2023). *Kiambu County integrated development plan 2023–2027*.

[11] Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage.

[12] Erskine, H. E., Norman, R. E., Ferrari, A. J., Chan, G. C. K., Copeland, W. E., Whiteford, H. A., & Scott, J. G. (2016). Long-term outcomes of attention-deficit/hyperactivity disorder and conduct disorder: A systematic review and meta-analysis. *Journal of the American Academy of Child and Adolescent Psychiatry*, *55*(10), 841–850. https://doi.org/10.1016/j.jaac.2016.06.016

[13] Fairchild, G., Hawes, D. J., Frick, P. J., Copeland, W. E., Odgers, C. L., Franke, B., Freitag, C. M., & De Brito, S. A. (2019). Conduct disorder. *Nature Reviews Disease Primers*, *5*(1), Article 43. https://doi.org/10.1038/s41572-019-0095-y

[14] Frick, P. J., & Kemp, E. C. (2021). Conduct disorders and empathy development. *Annual Review of Clinical Psychology*, *17*, 391–416. https://doi.org/10.1146/annurev-clinpsy-081219-105809

[15] Gekonde, J. (2011). *Influence of students' discipline on the schools' performance in Kenya Certificate of Secondary Education in Ruiru District* [Master's thesis, University of Nairobi]. University of Nairobi Repository. https://erepository.uonbi.ac.ke/items/68e6a022-3fff-4cac-bada-e76935249e5d

[16] Gicharu, M. W. (2024). *The influence of self-discipline on forms of anger expression among adolescents in selected secondary schools in Ruiru Sub County, Kiambu County, Kenya* [Master's thesis, Pan Africa Christian University]. PAC University Repository. https://repository.pacuniversity.ac.ke/handle/123456789/4827

[17] Gilliam, J. E. (2002). *Conduct Disorder Scale: Examiner's manual*. PRO-ED.

[18] Gitonga, M., Muriungi, S., Ongaro, K., & Omondi, M. (2017). Prevalence of conduct disorder among adolescents in secondary schools: A case of Kamukunji and Olympic Mixed Sub-County Secondary Schools in Nairobi County, Kenya. *African Journal of Clinical Psychology*, *1*, 85–101.

[19] Jakobsson, C. E., Johnson, N. E., Ochuku, B., Baseke, R., Wong, E., Musyimi, C. W., Ndetei, D. M., & Venturo-Conerly, K. E. (2024). Meta-analysis: Prevalence of youth mental disorders in sub-Saharan Africa. *Cambridge Prisms: Global Mental Health*, *11*, Article e109. https://doi.org/10.1017/gmh.2024.82

[20] James, N., & Munene, A. (2017). The prevalence of conduct disorder among juvenile delinquents in selected rehabilitation schools in Kenya. *African Journal of Clinical Psychology*, *1*, 102–119.

[21] Junewicz, A., & Billick, S. B. (2020). Conduct disorder: Biology and developmental trajectories. *The Psychiatric Quarterly*, *91*(1), 77–90. https://doi.org/10.1007/s11126-019-09678-5

[22] Kovess-Masfety, V., Husky, M. M., Keyes, K., Hamilton, A., Pez, O., Bitfoi, A., Carta, M. G., Goelitz, D., Kuijpers, R., Otten, R., Koç, C., Lesinskiene, S., & Mihova, Z. (2016). Comparing the prevalence of mental health problems in children 6–11 across Europe. *Social Psychiatry and Psychiatric Epidemiology*, *51*(8), 1093–1103. https://doi.org/10.1007/s00127-016-1253-0

[23] Mohammadi, M.-R., Salmanian, M., & Keshavarzi, Z. (2021). The global prevalence of conduct disorder: A systematic review and meta-analysis. *Iranian Journal of Psychiatry*, *16*(2), 205–225. https://doi.org/10.18502/ijps.v16i2.5822

[24] Moracha, E. N., Mbiriri, M., & Bironga, S. (2021). Examination of the prevalence of conduct disorder among young offenders: A case study of Shikusa Borstal Institution, Kenya. *Research Journal in Advanced Social Sciences*, *2*(1). https://doi.org/10.58256/rjass.v2i1.637

[25] Ndetei, D. M., Mutiso, V., Musyimi, C., Momanyi, R., Nyamai, P., Tyrer, P., & Mamah, D. (2023). DSM-5 conduct disorder and symptoms in youths at high risk of psychosis in Kenya with DSM-5 mental disorders and substance use: Towards integrated management. *Scientific Reports*, *13*(1), Article 22889. https://doi.org/10.1038/s41598-023-50192-3

[26] Njeri, A. C. K. (2022). *Correlation between destructive anger and academic achievement of secondary school students: Case of selected public secondary schools in Ruiru Sub-County, Kiambu County, Kenya* [Master's thesis, Daystar University]. Daystar University Repository. https://repository.daystar.ac.ke/items/47537169-f470-4ce9-ad7b-e2dd5ef4c61c

[27] Njoroge, P. M., & Nyabuto, A. N. (2014). Discipline as a factor in academic performance in Kenya. *Journal of Educational and Social Research*, *4*(1), 289–296. https://doi.org/10.5901/jesr.2014.v4n1p289

[28] Ojuope, A. V., & Ekundayo, O. O. (2020). Conduct disorder and its relationship with socio-demographics factors among secondary school adolescents in Ondo State, Nigeria. *American Journal of Applied Psychology*, *9*(3), 60–65. https://doi.org/10.11648/j.ajap.20200903.12

[29] Pessah, P. (2023). *The association between perceived maladaptive parental behavior and conduct disorder symptoms among adolescents attending the Youth Clinic at Kenyatta National Hospital* [Master's thesis, University of Nairobi]. University of Nairobi Repository. http://erepository.uonbi.ac.ke/handle/11295/165027

[30] Republic of Kenya. (2022). *The Children Act, 2022* (Act No. 29 of 2022). Government Printer.

[31] Salmanian, M., Asadian-Koohestani, F., & Mohammadi, M. R. (2017). A systematic review on the prevalence of conduct disorder in the Middle East. *Social Psychiatry and Psychiatric Epidemiology*, *52*(11), 1337–1343. https://doi.org/10.1007/s00127-017-1414-9

[32] Salmanian, M., Mohammadi, M. R., Hooshyari, Z., Mostafavi, S. A., Zarafshan, H., Khaleghi, A., Ahmadi, A., Alavi, S. S., Shakiba, A., Rahgozar, M., Safavi, P., Arman, S., Delpisheh, A., Mohammadzadeh, S., Hosseini, S. H., Ostovar, R., Hojjat, S. K., Armani, A., Talepasand, S., & Amiri, S. (2020). Prevalence, comorbidities, and sociodemographic predictors of conduct disorder: The National Epidemiology of Iranian Children and Adolescents Psychiatric Disorders (IRCAP). *European Child & Adolescent Psychiatry*, *29*(10), 1385–1399. https://doi.org/10.1007/s00787-019-01448-9

[33] Salvatore, J. E., & Dick, D. M. (2018). Genetic influences on conduct disorder. *Neuroscience and Biobehavioral Reviews*, *91*, 91–101. https://doi.org/10.1016/j.neubiorev.2016.06.034

[34] Wu, J., Chen, L., Li, X., Yue, S., Huang, X., Liu, J., Hou, X., & Lai, T. (2022). Trends in the prevalence of conduct disorder from 1990 to 2019: Findings from the Global Burden of Disease Study 2019. *Psychiatry Research*, *317*, Article 114907. https://doi.org/10.1016/j.psychres.2022.114907