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Assessment of Conduct Disorder Among in-School Adolescents in Lagos State

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Abstract

Conduct disorder (CD) among adolescents disrupts learning environments and predicts adverse psychosocial outcomes across the lifespan. The present study assessed the prevalence of CD and its demographic correlates among in-school adolescents in Lagos State, Nigeria. A cross-sectional survey method was used, and 905 participants (11 -18 years) were selected using a multistage sampling method. The participants were administered the Conduct Disorder sub-scale of the CODDS, which was in line with DSM-5 criteria. Age was assessed as a predictor using simple linear regression, while sex and school differences were examined using independent-samples t-tests. A total of 36.79 percent of participants were classified as having a moderate to high risk of CD. Male students measured higher on CD than female students ($t = 7.86$, $p < .001$), while adolescents attending private schools scored higher on CD than those attending public schools ($t = -2.63$, $p = .009$). There was no significant correlation between age and CD symptoms ($\beta = -.04$, $p = .719$). The research findings highlighted the high rate of CD amongst adolescents in Lagos State, especially among male adolescents and underscore the need for targeted interventions aimed at reducing the rate of CD in adolescents. Implementation of gender specific policies and mental health screenings are discussed.

Keywords: conduct disorder, adolescents, sex, school, age.

Introduction

Conduct Disorder (CD) is defined by the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) as a persistent and repetitive pattern of behaviour that violates the basic rights of others or major age-appropriate societal norms and rules (APA, 2013). It is a serious psychological condition marked by aggressive, deceitful, and rule-breaking behaviour, typically manifesting during childhood or adolescence (Fairchild et al., 2019). CD significantly impairs everyday functioning and is often accompanied by comorbid psychiatric conditions, such as oppositional defiant disorder (ODD), attention-deficit/hyperactivity disorder (ADHD), substance

use disorders (SUD), depression, anxiety, and post-traumatic stress disorder (PTSD) (Bernhard et al., 2018; Copeland et al., 2013).

While genetic vulnerabilities contribute to the development of CD, a wide range of environmental risk factors have been identified. These include low IQ, maladaptive parenting, peer delinquency, poverty, community violence, poor nutrition, exposure to pollutants like lead, maternal substance use during pregnancy, parental psychopathology, and inadequate parenting (Fairchild et al., 2019). Conduct disorder (CD) represents one of the most disruptive adolescent psychiatric conditions, characterised by deficits in empathy, impulse control, and social responsibility that manifest as aggression, deceitfulness, and rule-breaking (Okon, 2023). Adolescence is widely acknowledged as a sensitive window for its onset due to rapid neurobiological and psychosocial changes, including hormonal surges, heightened reward sensitivity, and greater susceptibility to peer influence (Byrge et al., 2014; Blakemore & Mills, 2014). These developmental vulnerabilities are further exacerbated by environmental adversity such as chaotic households, exposure to community violence, or economic deprivation (Busari & Adejumobi, 2012; Fong et al., 2019). Thus, CD emerges not as a simple behavioural problem but as the product of intersecting biological, psychological, and contextual forces.

Epidemiological data highlight both the global burden and heterogeneity of CD. The DSM-5 places prevalence between 1% and 10% worldwide (APA, 2013), while a recent meta-analysis of 186,000 participants across 35 countries estimated a pooled prevalence of 8%, with higher rates among males (Mohammadi et al., 2021). Gendered patterns remain consistent: boys are more likely to display overt physical aggression, whereas girls tend toward relational and covert aggression (Kroneman et al., 2009; Ackermann et al., 2019). Despite lower overall prevalence in females, CD remains a leading cause of disability and a key referral point for adolescent girls (Erskine et al., 2014; Merikangas et al., 2010). Together, these findings affirm CD as a global health priority, but one with variable manifestations across gender and cultural contexts.

In Nigeria, research has begun to document prevalence and correlates, but findings remain inconsistent. Ojuope and Ekunudayo (2020) report prevalence rates reaching 14.5%, exceeding many global estimates. Regional evidence adds further complexity: in Oyo State, Kumuyi et al. (2021) identified authoritarian and disengaged parenting as predictors of CD, while unexpectedly finding higher socioeconomic class associated with more disruptive behaviours, possibly due to reduced supervision. Lagos State, a densely populated and socioeconomically diverse setting, has witnessed growing reports of truancy, bullying, gang involvement, and school violence. Yet most studies have focused broadly on adolescent deviance rather than employing validated diagnostic frameworks such as DSM-5. Moreover, socio-demographic determinants—including family structure, income, religion, and ethnicity—remain underexplored, leaving unclear how these factors interact with neurodevelopmental vulnerabilities to influence CD risk.

Taken together, the literature demonstrates three points of consensus: adolescence is a pivotal developmental period for CD onset, gender strongly shapes its manifestation, and contextual factors—including parenting, socioeconomic pressures, and exposure to violence—exert powerful influence. At the same time, inconsistencies in prevalence estimates, especially in Nigerian settings, and the lack of studies applying standardised diagnostic criteria reveal significant knowledge gaps. These limitations constrain evidence-based intervention and policy design, particularly in low- and middle-income countries where adolescent antisocial behaviour is increasingly visible.

Guided by the biopsychosocial model, which conceptualises CD as arising from dynamic interactions among biological predispositions, psychological traits, and socio-environmental stressors, this study addresses these gaps by systematically assessing the prevalence of CD among adolescents in Lagos State using DSM-5 criteria. By also examining socio-demographic correlates, it seeks not only to contribute epidemiological data but also to clarify the cultural and contextual dimensions of CD in Nigeria. In doing so, the study positions itself at the intersection

of global mental health research and local policy relevance, offering insights to inform targeted interventions for at-risk youth.

This study seeks to assess the prevalence and demographic correlates of conduct disorder among in-school adolescents in Lagos State, using a structured questionnaire and DSM-5 diagnostic criteria. By identifying patterns of conduct disorder and their association with key social and demographic variables, the study aims to contribute data-driven insights for school mental health interventions and policy development.

Research Objectives

The main objective of this study is to assess conduct disorder among in-school adolescents in Lagos State. The main objective was examined in the following specific objectives:

1. To examine the prevalence of conduct disorder among in-school adolescents in Lagos State
2. To examine the influence of sex on conduct disorder among in-school adolescents.
3. To examine the difference between school type and conduct disorder among in-school adolescents.
4. To determine if age will predict conduct disorder among in-school adolescents.

Hypotheses

i. Male will significantly score higher on the measures of disruptive behaviours compared to their female counterparts

ii. In-school adolescents attending private secondary schools will significantly score higher on measures of conduct disorder compared to their counterparts attending public secondary schools.

iii. Age will significantly predict conduct disorder among in-school adolescents in Lagos State.

Method

Design

The study employed a cross-sectional research design using quantitative methods. The cross-sectional survey research design is well-suited for collecting data at a single point in time across different age groups, particularly in the absence of manipulations.

Population

The study was conducted among in-school adolescents in selected secondary schools in Lagos State.

Sample

Krejcie and Morgan's (1970) sample size determination was used with a population estimate of over 500,000; the sample size of 905 was used for the study [males=464 (51.3%) and females 441 (48.7%) with a mean age = 14.75, SD= 1.52. Public school 469 (51.8%) and private school 436 (48.2%)

A multi-stage sampling technique consisting of four stages was employed to select in-school adolescents across secondary schools in Lagos State. The Lagos State Secondary Education System is divided into six education districts. In the first stage, four (4) districts (I, IV, V and VI) were randomly selected using a simple random sampling technique (balloting), ensuring each district had an equal chance of being chosen. Within each selected education district, the schools were stratified into two

categories: public and private schools. From each stratum (public and private) within the selected districts, twelve schools (six public and six private) were randomly selected using a table of random numbers to maintain fairness and reduce selection bias. Afterwards, a convenience sampling technique was used to administer the research instruments to the students who met the inclusion criteria across the selected school.

The inclusion criteria are adolescents between the age range of 11 – 18 years and should be able to read and write effectively, while the exclusion criteria are children below 11 years, adults above 18 years, adolescents not in secondary school or adolescents in technical school or tertiary institutions.

Research Instruments

Respondents were given a socio-demographic questionnaire to collect information such as their sex, age, and school type. Raine et al. (2022) developed the Conduct Disorder (CD) subscale of the Conduct and Oppositional Defiant Disorder Scales (CODDS), which was then used. The conduct disorder scale is a measure that assesses conduct disorder symptoms in adolescents in accordance with the DSM-5 criteria. This subscale includes 15 items (items 10–24), each scored on a 3-point Likert scale: 0 = Never, 1 = Sometimes, and 2 = Often. Scores range from 0 to 30, with higher scores indicating more severe conduct-related behavioural issues such as physical aggressiveness, property destruction, deceitfulness, and substantial rule violations. In terms of psychometric performance, the CD subscale has demonstrated high internal consistency.

The internal reliability for Conduct Disorder, as reported by Raine et al. (2022), was 0.84. According to this study, the total Cronbach's alpha reliability for Conduct Disorder was .85.

Procedure

Approval to conduct the study was obtained from the Lagos State Ministry of Basic and Secondary Education and participating school principals. Parental consent and student assent were secured, and only volunteers participated. Questionnaires were administered in classrooms, took 5–10 minutes to complete, and were collected immediately. Data collection lasted one week.

Statistical Analysis

Descriptive and inferential statistics were used to analyse the data using SPSS version 25 statistical software. Descriptive statistics were used to determine the sociodemographic distribution of the respondents and the prevalence of conduct disorder, while the stated hypotheses one and two were tested using a t-test for independent means, and hypothesis three was tested using simple linear regression.

Ethical Considerations

The study involved human participants; as a result, the researcher obtained ethical approval from the Redeemer's University Ethical Review Board with reference number ***RUN/REC/2024/244.*** Furthermore, the researcher ensured that participants understood the research's purpose and that taking part in it would be completely voluntary. They were also assured that the information gleaned from this study would be used only for scholarly pursuits.

Results

Table 1

Socio-Demographic Distribution of the Respondents

Factors	Options	Frequency	%
Sex	Male	464	51.3
	Female	441	48.7
	Total	905	100.0
Religion	Christian	703	77.7
	Muslim	194	21.4
	Traditional	7	0.8
	Others	1	0.1
	Total	905	100.0
School type	Public	469	51.8
	Private	436	48.2
	Total	905	100
Age (in years)	Mean 14.75; SD=1.52 Ranges between 12 and 18		

Table 1 shows the distributions of the socio-demographic characteristics of the respondents. It was revealed that 51.3% were male respondents and 48.7% were female. The result revealed that 77.7% were Christians, 21.4% were Muslims, 0.8% and 0.1% chose traditional other religions, respectively. 51.8% of the respondents were from public schools, while 48.2% were from private schools. Their ages ranged from 12 years to 18 years (M = 15.12, SD = 1.23).

Test of Prevalence

The sampled data were subjected to statistical tests, and a mean-based classification was used to calculate the prevalence of conduct disorder among in-school adolescents in Lagos State.

To classify the severity of conduct disorder symptoms into four levels (None, Low, Moderate, and High), cut-off points were derived using the mean and standard deviation (M=4.86, SD=5.52). Specifically, the boundaries between the categories

were defined using the mean and one standard deviation above and below the mean. None: 0.00 – 0.99, Low: 1.00 – 4.86, Moderate: 4.87 – 10.38, High : ≥10.39

Table 2

Frequency, Percentage, Mean and Standard Deviation showing the conduct disorders among in-school adolescents in Lagos State.

Variable	N	Mean	SD	Prevalence				
				None	Low	Moderate	High	Prevalence
Conduct Disorder	905	4.86	5.52	177 (19.6%)	395 (43.6%)	211 (23.3%)	122 (13.5%)	333 (36.79%)

From Table 2, it could be revealed that 19.6% had no symptoms of conduct disorder, which means virtually no observable conduct disorder symptoms. 43.6% had a low risk of conduct disorder, which indicates very few conduct disorder symptoms, with minimal impact on functioning. 23.3% had a moderate risk of conduct disorder, which means that a noticeable level of conduct disorder symptoms may interfere with daily functioning. 13.5% had a high risk of conduct disorder, which represents a significant severity of conduct disorder symptoms that could require further assessment or intervention. The majority of the participants had a low risk of conduct disorder. The result further revealed that the prevalence of conduct disorder among in-school adolescents was 36.79%, which indicates a moderate-to-high prevalence of conduct disorder among in-school adolescents.

Table 3

T-test for independent means showing the influence of sex on conduct disorder among in-school adolescents.

	Sex	N	Mean	Std	Df	t-value	Sig
Conduct Disorder	Male	464	6.22	6.35	903	7.86	.000
	Female	441	3.42	4.03			

The result in the table showed that there was a significant influence of sex on conduct disorder among in-school adolescents in Lagos State (t= 7.86; df (930); P<.01. It could be further revealed that male in-school adolescent significantly scores higher (Mean=6.22 and SD=6.35) on the measures of conduct disorder compared to their female counterparts (Mean= 3.42 and SD=4.03). The stated hypothesis is thereby confirmed.

Table 4

T-test for independent means showing the influence of school type on conduct disorder among in-school adolescents.

	School type	N	Mean	Std	Df	t-value	Sig
Conduct Disorder	Public	469	4.39	5.88	903	-2.63	.009
	Private	436	5.36	5.07			

The result in the table showed that there was a significant influence of school type on conduct disorder among in-school adolescents in Lagos State (t= -2.63; df (903); P<.01). It could be further revealed that in-school adolescent students attending private secondary school (Mean=5.36 and SD=5.07) significantly score higher on the measures of conduct disorder compared to their counterparts attending public secondary school (Mean=4.39 and SD=5.88). The stated hypothesis is thereby confirmed.

Table 5

Summary table of Simple linear regression showing the influence of Age on conduct disorder among in-school adolescents.

Model		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.49	1.79	_	3.07	.002
	Age	-.043	.121	-.012	-.360	.719

R=.012; R^2= .000

The result from the table revealed that age did not significantly predict disruptive behaviour disorders (β= -.04, t= -.360, p > .05). The hypothesis, which suggested that age would be a significant predictor of conduct disorders, was not supported by the data. Although the negative β coefficient suggests a potential inverse relationship (with the higher the age, the fewer conduct disorder, this relationship was not statistically significant. The result runs contrary to the stated hypothesis. Therefore, the stated hypothesis is thereby rejected.

Discussion

The study examined the prevalence of conduct disorder (CD) and its associated demographics among in-school teenagers in Lagos State. The study used a DSM-5-aligned scale and found that 36.8% of pupils had moderate-to-high risk for CD symptoms. This prevalence estimate is much higher than the pooled international rate of 8% published by Mohammadi et al (2021), as well as the 14.5% recorded by Adeniyi and Ekundayo (2020) in Ondo State.

The results confirmed the first hypothesis, which predicted that guys would score significantly higher than girls on disruptive behaviour assessments. This finding is consistent with previous studies (Erskine et al., 2014; Fairchild et al., 2019). Additionally, Kumuyi, et al (2021) found a considerable increase in disruptive

behaviour among boys in Oyo State. The study found that male adolescents scored higher on CD measures, highlighting the need for gender-responsive intervention options. Bandura's (1986) social-cognitive theory states that girls are socialised to participate in indirect or relational aggression, whilst guys are rewarded more for overt aggressiveness.

One surprising but insightful result of hypothesis two was that pupils in private schools had higher CD scores than their counterparts in public schools. Prior research conducted in Nigeria has produced contradictory results. While Akpan et al. (2020) reported a higher prevalence of disruptive behaviour in private schools, Ojuope and Ekunudayo (2020) found higher CD in public schools, which they attributed to resource shortages and overcrowded classrooms. Additionally, Odofin and Ofojebe (2019) discovered that aberrant behaviours were common in both public and private schools in Delta State. The mixed evidence underscores that school context interacts with parental monitoring, peer norms, and resource availability. The current finding revealed that private-school students scored higher than public-school peers in conduct disorder. This suggests that privilege does not confer immunity from behavioural risk and may highlight gaps in psychosocial support within some private institutions.

Contrary to developmental expectation and earlier meta-analytic evidence (Mohammadi et al., 2021), age did not significantly predict CD symptoms in the cohort. Although many longitudinal studies document a peak in antisocial behaviour in mid-adolescence followed by a gradual decline (Moffitt et al., 2011), cross-sectional snapshots can miss nuanced developmental trajectories. Within Nigeria, Adeniyi and Ekundayo (2020) reported a modest decline in CD symptoms after age 16, whereas Kumuyi et al. (2021) found no significant age influence. Consistent with these mixed patterns, the present study observed no significant predictive power of age on CD. The narrow age bracket (11–18 years) and the school-based sampling frame could also obscure age-linked patterns: students with severe externalising behaviour may already have exited the school system.

Collectively, these insights extend the literature and demonstrate the importance of socio- ecological nuance in adolescent mental- health research.

Conclusion

This research provides the first large- scale, DSM- 5–based estimate of conduct- disorder risk among in- school adolescents in Lagos State. The study demonstrates that CD is not merely a marginal behavioural issue but a mainstream concern affecting more than a third of the student population. Sex and school type emerged as consistent correlates, whereas age did not, challenging assumptions about developmental patterns in Nigerian youths. These data underscore that early adolescence is not the only window of risk and suggest a need for comprehensive behavioural support throughout the secondary school years. Taken together, the findings support a biopsychosocial understanding of conduct disorder. No single factor explains the outcomes. It's a mix of individual development, social modelling (especially from peers), and broader environmental factors like school type and parenting style. If we want to make real progress, interventions have to be just as multidimensional.

One practical implication is the need for behavioural screening in schools, perhaps once a year, during school health checks. This way, students who need help don't slip through the cracks. Another takeaway is that being in a private school doesn't mean a student is "safe" from behavioural risks—interventions should be available across the board.

In summary, the findings emphasise that adolescent mental health is complex and often misunderstood. This study contributes valuable, localised insights to a body of research that's still growing in the African context.

Recommendations

The State Ministry of Education should integrate annual screening for conduct problems and mental health issues into school health programs, provide in-school

counsellors for students, and develop gender-sensitive intervention programs. Teachers should be trained in basic mental-health detection and referral practices, especially in private schools. Education districts should host quarterly parent workshops on authoritative parenting, consistent discipline, and digital-age supervision strategies. Policy integration should include adolescent behavioural health targets in Nigeria's Universal Basic Education blueprint and align funding from the Mental Health Act for school-based interventions. Future research should integrate biological markers, peer-network analyses, and community-level violence indicators to test preventive models. Universities should embed child and adolescent mental-health modules in teacher-training curricula for future educators.

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