Original Article e-ISSN: 2349-0659 p-ISSN; 2350-0964

Exploring the Prevalence and Sociodemographic Correlates of Oppositional Defiant Disorder among Junior Secondary School Students in Ilorin

Adebola Victoria Arinde[1]*, Ayodele Ojuawo[1], M. A. N. Adeboye[1], M. F. Tunde-Ayinmode[2], O. W. Arinde[3]

Abstract

Background: Oppositional defiant disorder (ODD) is a recognized behavioral disorder that often emerges during childhood and adolescence. This study investigates the prevalence and sociodemographic correlates of ODD among junior secondary school (JSS) students in Ilorin, Nigeria. It examines the sociodemographic characteristics of the student population, including age, gender, family peculiarities, and school type, to gain insights into the prevalence of ODD within this context. **Materials and Methods**: A cross-sectional school-based study in Ilorin, Nigeria, included 1078 junior secondary students. Sampling was done through multi-stage probability random sampling, and ethical approvals were obtained. Students aged 9–18 years were included, excluding those with prior behavioral or neuropsychiatric disorders, neurological sequelae of a previous disease, sensory deficits, or chronic medical conditions affecting school attendance. Parental consent, assent, the study pro forma, and parent and teacher rating scales of the Vanderbilt ADHD rating scale for ODD and conduct disorder were part of the recruitment process. After analyzing 1078 screening questionnaires, 211 students met ODD criteria, leading to diagnostic interviews, which identified 41 ODD cases. **Results**: The study uncovers a notable 3.8% prevalence rate of ODD among JSS students, with a male pre-dominance (5.5%) compared to females (2.1%). Age, social class, family dynamics, and school environment are explored as potential correlates, with gender emerging as a significant predictor of ODD. The analysis highlights the multifaceted nature of ODD prevalence and its sociodemographic influences. **Conclusion**: This research underscores the importance of tailored interventions, emphasizing gender-specific considerations in addressing ODD among JSS students in Ilorin. It calls for nuanced strategies that account for the diverse socio-demographic landscape of this student population, aiming to enhance prevention and management strategies for this disorder.

Keywords: Oppositional defiant disorder, Prevalence, Psychiatric condition, Socio-demographic correlates

Asian Pac. J. Health Sci., (2024); DOI: 10.21276/apjhs.2024.11.1.02

Introduction

Oppositional defiant disorder (ODD) is a recognized behavioral disorder that often emerges during childhood and adolescence.[1] It is characterized by a consistent pattern of negative, defiant, and hostile behavior, frequently directed toward authority figures.[2] The impact of ODD extends beyond the individual, affecting families, schools, and communities.[3] This study aims to investigate the prevalence and sociodemographic correlates of ODD among junior secondary school (JSS) students in Ilorin.

ODD is not limited by geographical boundaries; it is a global mental health concern that affects young people from diverse backgrounds.[4-6] Therefore, it is imperative to explore its prevalence and sociodemographic correlates to understand the extent of the disorder's reach and its implications for child and adolescent mental health.

ODD also significantly strains families and communities.[7-9] Relationships may suffer, family dynamics may be upset, and general well-being may suffer.[10] This research can shed important light on how family dynamics, socioeconomic position, and community variables affect the frequency and duration of the illness by exploring the sociodemographic aspects connected to ODD.[11]

Planning and distributing mental health resources and services in Ilorin depend on precise data on the incidence of ODD and its correlates.[12] This study can help with the customization of support and intervention programs to meet the unique requirements of junior high and secondary school kids with ODD.

Early identification and intervention are pivotal for preventing the long-term negative consequences of ODD.[13] By investigating the prevalence and sociodemographic correlates, this study can contribute to the development of targeted prevention and early intervention programs, ultimately reducing the incidence of ODD among JSS students in Ilorin.

Nigeria is a diverse country with unique cultural, regional, and socioeconomic variations.[14] The prevalence and correlates of ODD can vary across different regions and populations.[15] Exploring this within the context of Ilorin provides valuable insights into the local factors influencing ODD's occurrence, allowing for the development of context-specific strategies and interventions.

Despite the growing recognition of mental health issues among Nigerian youth,[16] there is a noticeable research gap concerning ODD among JSS students in Ilorin. This study aims to

[1]Department of Paediatrics, University of Ilorin Teaching Hospital, Ilorin, Nigeria.

[2]Department of Psychiatry, University of Ilorin Teaching Hospital, Ilorin, Nigeria.

[3]Department of Internal Medicine, University of Ilorin Teaching Hospital, Ilorin, Nigeria.

Corresponding Author: Dr. Adebola Victoria Arinde, Department of Paediatrics, University of Ilorin Teaching Hospital, Ilorin, Nigeria. E-mail: adebola2808@gmail.com

Howtocitethisarticle: Arinde AV, Ojuawo A, Adeboye MAN, Tunde-Ayinmode MF, Arinde OW. Exploring the Prevalence and Sociodemographic Correlates of Oppositional Defiant Disorder Among Junior Secondary School Students in Ilorin. Asian Pac. J. Health Sci., 2024;11(1):5-11.

Source of support: Nil.

Conflicts of interest: None.

Received: 11/02/2024 **Revised:** 12/03/2024 **Accepted:** 10/04/2024

address this gap and contribute to the understanding of child and adolescent mental health within the region.

In conclusion, this research seeks to investigate the prevalence and sociodemographic correlates of ODD among JSS students in Ilorin using a standardized screening tool (Vanderbilt ADHD parent and teacher rating scale for ODD and conduct disorder). By doing so, it aims to provide a comprehensive understanding of the local context, the challenges faced by students, and the factors contributing to the development of ODD. The findings from this research have the potential to inform targeted interventions, policy development, and support systems, ultimately enhancing the well-being of JSS students in Ilorin and advancing the field of child and adolescent mental health research in Nigeria.

Materials and Methods

Study Design and Site

This descriptive cross-sectional school-based study took place in Ilorin, the capital city of Kwara State in Nigeria. Ilorin, located approximately 500 km from Abuja, is home to a diverse population of around 1 million people. The study involved selected private and public JSSs in the region, where there are a total of 228 registered JSS s, comprising 105 public and 123 private schools, serving 64,387 students (9,218 in private and 55,169 in public).

Study Population and Sample Size

The study focused on JSS students aged 9–18 years. The sample size was determined using a formula for single proportion, resulting in a minimum sample size of 980 students. To account for potential non-responses, the final sample size was set at 1078 students. This comprehensive sample size was distributed across both public and private schools, taking into account the varying student populations in different local government areas (LGAs) of Ilorin.

Sampling Technique

A multi-staged probability random sampling technique was employed to select participants. The process involved proportional representation of students in each LGA based on the population in both public and private schools. This was calculated with precision, ensuring fair representation from each area. The selection of schools was conducted through simple random sampling, and the chosen schools included both public and private institutions, ultimately totaling 16 schools.

Inclusion and Exclusion Criteria

Students aged 9–18 attending JSSs in Ilorin were included in the study. However, students with previously diagnosed behavioral or neuropsychiatric disorders, physical evidence of neurological sequelae of a previous disease, uncorrected sensory deficits, or chronic medical conditions that hindered regular school attendance were excluded from the study.

Ethical Considerations

The study was conducted with ethical approval from the Ethics and Research Committee of the University of Ilorin Teaching Hospital. Written permission was also obtained from the Kwara State Ministry of Education, and consent was secured from school principals and class teachers during the fieldwork. Parental consents and assents were also sought from the participants.

Recruitment Process

The recruitment process for the study involved obtaining ethical approvals, seeking permission from school principals, and introducing the research to students in selected schools. Parents received information sheets and provided informed consent. Students were chosen based on research protocols and local government quotas, with additional subjects added to compensate for non-participation. Consent forms were carefully reviewed as well as the assents, and participants confirmed their ability to read and write. The students were given the study pro forma that contained the biodata, sociodemographic variables, and the exclusion criteria. The standardized tool (Vanderbilt ADHD parent and teacher rating scale for ODD conduct disorder) Teacher rating scales were explained to the teachers, while the parent rating scales were sent home through the children of the parents that consented. Out of 1078 analyzed questionnaires, 211 students met the ODD criteria. These students proceeded to a second stage involving interviews with teachers based on the DSM-5 manual criteria, resulting in 41 diagnosed cases of ODD [Figure 1].

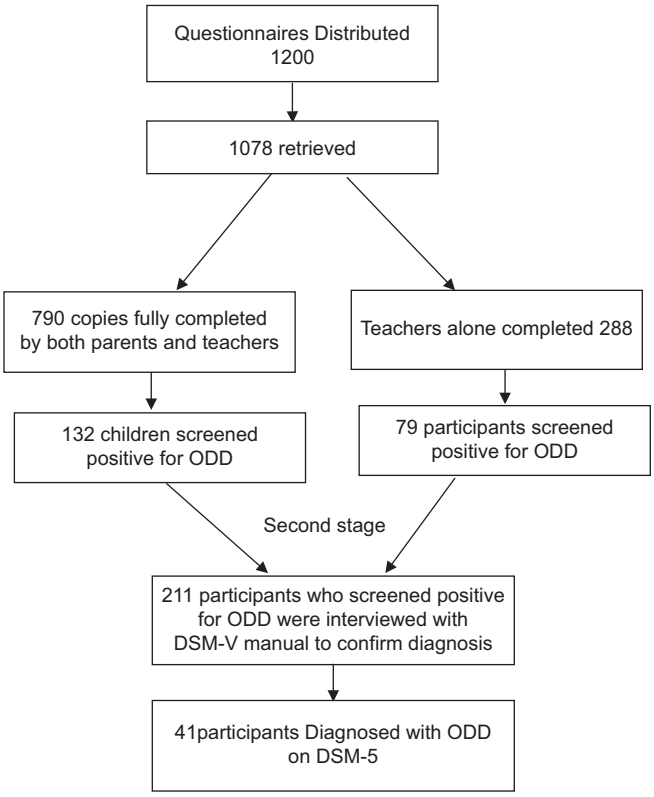

Figure 1: Schematic representation of the steps taken in the diagnosis of ODD

Results

Comprehensive Socio-Demographic Overview of Study Participants

Table 1 offers an in-depth glimpse into the sociodemographic makeup of the JSS students in this study. Participants were categorized into three age groups, with the majority (52.3%) aged 13–15, followed by 9–12 years (38.2%), and the smallest portion (9.5%) aged 16–18. Their average age was 13.1 years (SD 1.9). The gender distribution was nearly equal, with 50.9% males and 49.1% females. Regarding school type, a significant majority (85.7%) attended public schools, while 14.3% attended private schools. The distribution across JSS classes showed representation in JSS1 (14.3%), JSS2 (39.3%), and JSS3 (46.4%), highlighting a diverse sample across different stages of junior secondary education.

Family Sociodemographics of JSS Students in Ilorin

Table 2 unveils a comprehensive portrait of the family socio-demographic characteristics of the 1078 JSS students in Ilorin who participated in this study, shedding light on their backgrounds and family structures. The majority (83.2%) identified their parents' ethnicity as Yoruba, underlining its prominence in the sample. A minority represented other ethnicities, with 3.9% being Igbo, 2.8% being Hausa, and 10.1% being categorized as "Others." Regarding religion, 67.2% of parents were Muslims, while 32.8% were Christians. The study assessed family social class, revealing that a significant majority (57.0%) belonged to the "Upper" class. A substantial portion fell into the "Middle" class (39.5%), while a smaller fraction (3.5%) was categorized as the "Lower" class. This socio-economic distribution offers insights into the economic diversity within the study population. Family structures were predominantly monogamous, with 78.8% reporting monogamous marital arrangements for their parents, while 21.2% came from polygamous families. Most respondents reported that their parents were currently married (92.5%). In contrast, 2.9% were widowed, and 4.6% indicated their parents were divorced or separated, showcasing the variety of family statuses. An overwhelming majority (92.1%) reported living with both parents, whereas 7.9% did not reside with both parents. Concerning parents' cohabitation, 87.9% stated that both parents were living together, while 12.1% reported that their parents were not living together. The study delved into the number of siblings, with 54.9% having fewer than four siblings, 38.9% having four to six siblings, 5.3% having seven to nine siblings, and a mere 0.9% having ten or more siblings. This provides insights into the varied family sizes among participants. These rich family socio-demographic insights underscore the diversity within the study population and lay a foundational understanding for exploring the prevalence and socio-demographic correlates of ODD among JSS students in Ilorin.

Table 1: Sociodemographic characteristics of the respondents

Variables	*Frequency n = 1078*	*Percentage*
Age group (years)		
9–12	412	38.2
13–15	564	52.3
16–18	102	9.5
Mean age ± SD.	13.1 ± 1.9	
Gender		
Male	549	50.9
Female	529	49.1
Type of school		
Private	154	14.3
Public	924	85.7
Class		
JSS1	154	14.3
JSS2	424	39.3
JSS3	500	46.4

N: Number of respondents for each variable, JSS: Junior secondary school

Sociodemographic Disparities between Private and Public School Attendees

Table 3 intricately dissects the socio-demographic characteristics of the study's participants based on their school type, private, or public. Employing Chi-square tests to scrutinize the associations, the study found compelling disparities. Firstly, age group distribution revealed a significant association, with a striking contrast in the 9–12 age groups, where 81.2% attended private schools versus 31.1% in public schools. Conversely, the 13–15 age groups saw a higher percentage in public schools (58.0%) compared to private schools (18.2%). Remarkably, the 16–18 age groups exhibited no significant difference in school distribution. Gender distribution yielded no significant variation, with both private and public schools displaying similar percentages of males and females. However, social class exhibited significant associations, with a notable prevalence of upper-class students in private schools (67.5%) versus public schools (55.2%). Conversely, the middle social class had a higher representation in public schools (41.0%) than private schools (30.5%), while the lower social class showed no significant difference between

Table 2: Family sociodemographic characteristics of the respondent

Variables	*Frequency n = 1078*	*Percentage*
Parent's ethnicity		
Yoruba	897	83.2
Igbo	42	3.9
Hausa	30	2.8
Others	109	10.1
Parent's religion		
Christianity	354	32.8
Islam	724	67.2
Family social class		
Upper	614	57.0
Middle	426	39.5
Lower	38	3.5
Family type		
Monogamous	849	78.8
Polygamous	229	21.2
Parent's Marital Status		
Married	997	92.5
Widowed	31	2.9
Divorced/separated	50	4.6
Live with parents		
Yes	993	92.1
No	85	7.9
Parents live together		
Yes	948	87.9
No	130	12.1
Number of siblings		
<4	592	54.9
4–6	419	38.9
7–9	57	5.3
≥10	10	0.9

Other ethnic groups: Nupe, Fulani and Ebira, N: Number of respondents for each variable

private (1.9%) and public (3.8%) schools. Furthermore, class levels revealed significant associations, with JSS1 and JSS2 students being more prevalent in private schools than public schools, while JSS3 students showed no significant difference in distribution. These findings illuminate the intricate sociodemographic interplay between school types among JSS students in Ilorin, offering valuable insights for understanding educational disparities.

Prevalence of ODD in the Study Population

Forty-one students of the 1078 subjects fulfilled the criteria for the diagnosis of ODD, giving an overall prevalence of 3.8% [Figure 2]. Out of the 41 participants with ODD, 30 (56.1%) were males, and 11 (36.6%) were females, giving a male-to-female ratio of 2.7:1. The male prevalence was 5.5%, while the female prevalence was 2.1%.

Sociodemographic Analysis of ODD Cases versus Non-Case

Table 4 meticulously dissects socio-demographic differences between JSS students with ODD and those without ODD.

Table 3: Comparison of the socio-demographic characteristics of the study respondents based on the type of school they attend

Variables	*Type of school*		χ^2	*P-value*
	Private *n (%)*	*Public* *n (%)*		
Age group (years)				
9–12	125 (81.2)	287 (31.1)	141.484	<0.001
13–15	28 (18.2)	536 (58.0)	115.973	<0.001
16–18	1 (0.6)	101 (10.9)	2.405^Y	0.121
Gender				
Male	87 (56.5)	462 (50.0)	2.227	0.136
Female	67 (43.5)	462 (50.0)		
Social class				
Upper	104 (67.5)	510 (55.2)	8.476	0.014
Middle	47 (30.5)	379 (41.0)	7.067	0.008
Lower	3 (1.9)	35 (3.8)	0.015^Y	0.746
Class				
JSS1	68 (44.2)	86 (9.3)	131.359	<0.001
JSS2	43 (27.9)	381 (41.2)	84.236	<0.001
JSS3	43 (27.9)	457 (49.5)	0.646	0.422

*Statistical significance ($P < 0.05$), Y: Yates corrected Chi-square
% = percentage, JSS: Junior secondary school

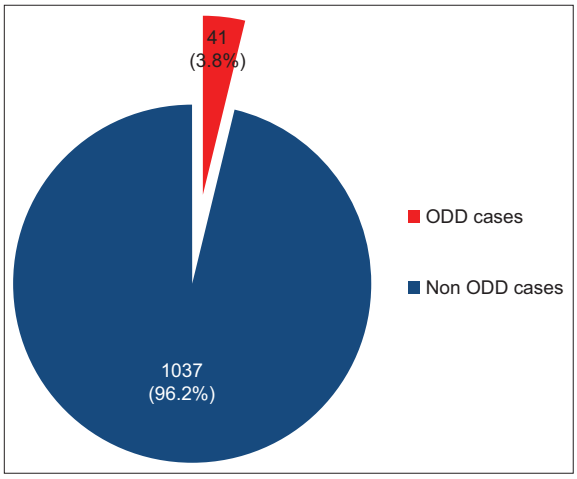

Figure 2: Overall prevalence of ODD among the respondents

Employing chi-square tests, the study unearthed crucial insights. Firstly, age groups exhibited no significant association with ODD status, revealing consistent ODD prevalence across age brackets. Gender, on the other hand, displayed a significant association, with a higher proportion of males identified as ODD cases (5.5%) compared to females (2.1%). Conversely, social class and the type of school attended exhibited no significant associations with ODD status, suggesting that ODD prevalence was not significantly influenced by socioeconomic factors or school type in this context. Furthermore, analyzing class levels in JSS revealed no significant associations with ODD status, emphasizing the absence of specific grade-level links to ODD. These findings underscore the multifaceted nature of ODD and imply the need for comprehensive, gender-sensitive interventions, considering diverse sociodemographic contexts among JSS students in Ilorin.

Family Characteristics and ODD

Table 5 presents a comparative analysis of family characteristics between cases and non-cases of ODD among the study participants. Chi-square tests were utilized to assess the association between these variables, with statistical significance set at $P < 0.05$. The analysis of parental marital status did not reveal any significant association with ODD status ($\chi^2 = 1.682$, $P = 0.431$ for married parents; $\chi^2 = 1.597$, $P = 0.206$ for widowed parents; $\chi^2 = 0.310$, $P = 0.578$ for divorced/separated parents). No significant association was observed between ODD status and family type ($\chi^2 = 0.013$, $P = 0.910$ for monogamous families; $\chi^2 = 0.000$, $P = 0.992$ for polygamous families).

The analysis of whether the respondents lived with their parents did not yield a significant association with ODD status ($\chi^2 = 0.187$, $P = 0.665$ for living with parents; $\chi^2 = 0.000$, $P = 0.992$ for not living with parents). Similarly, there was no significant association between ODD status and whether the parents lived together ($\chi^2 = 0.000$, $P = 0.992$ for parents living together; $\chi^2 = 0.000$, $P = 0.992$ for parents not living together).

Table 4: Comparison of sociodemographic characteristics of the cases and non-cases of oppositional defiant disorder

Variable	*ODD*		χ^2	*P-value*
	Cases $n_1 = 41$ *n (%)*	*Non-cases* $n_2 = 1037$ *n (%)*		
Age group (years)				
9–12	15 (3.6)	397 (96.4)	0.064^Y	0.969
13–15	23 (4.1)	541 (95.9)	0.033^Y	0.856
16–18	3 (2.9)	99 (97.1)	0.072^Y	0.788
Mean ± SD (years)		13.3 ± 1.7		
Gender				
Male	30 (5.5)	519 (94.5)	8.438	0.004
Female	11 (2.1)	518 (97.9)		
Social class				
Upper	23 (3.7)	592 (96.3)	0.189	0.910
Middle	17 (4.0)	409 (96.0)	0.041	0.975
Lower	1 (2.7)	36 (97.3)	0.003^Y	0.956
Type of School				
Private	9 (5.8)	145 (94.2)	2.045	0.153
Public	32 (4.0)	892 (96.0)		
Class				
JSS 1	6 (3.9)	148 (96.1)	1.033	0.596
JSS 2	19 (4.5)	405 (95.5)	0.093	0.760
JSS 3	16 (3.2)	484 (96.8)	1.033	0.309

*statistical significance ($P<0.05$), Y: Yates corrected Chi, IQR: Inter-quartile range, SD: Standard deviation, JSS: Junior secondary school

The number of siblings in the family was not significantly associated with ODD status (χ^2 = 2.493, *P* = 0.477 for fewer than four siblings; χ^2 = 1.373, *P* = 0.241 for 4–6 siblings; χ^2 = 0.838, *P* = 0.360 for 7–10 siblings; χ^2 = 0.984, *P* = 0.321 for more than 10 siblings).

In summary, the analysis of family characteristics did not reveal any statistically significant associations with ODD status among the study participants. Parental marital status, family type, living arrangements, parents' cohabitation status, and the number of siblings in the family did not show any significant differences between cases and non-cases of ODD.

Gender as a Predictor of ODD

Table 6 displays the results of a binomial logistic regression analysis examining the association between gender and ODD among the study respondents. This analysis aimed to determine whether gender was a significant predictor of ODD, with the coefficient of logistic regression (B), the corresponding 95% confidence interval (CI), odds ratio (OR), and p-value presented.

The logistic regression analysis revealed a statistically significant association between gender and ODD (B = 1.001, 95% CI: 1.350–5.490, OR = 2.722, *P* = 0.005). Specifically, the male gender was associated with higher odds of having ODD compared to females.

In summary, the logistic regression analysis suggests that being male is a significant predictor of ODD among the study respondents. The male gender is associated with an increased likelihood of ODD when compared to females.

Table 5: Comparison of the family characteristics of the cases and non-cases of ODD

Variables	*ODD*		χ^2	*P-value*
	Cases $n_1 = 41$	*Non-cases* $n_2 = 1037$		
Parent's marital status				
Married	36 (3.6)	961 (96.4)	1.682^Y	0.431
Widowed	3 (9.7)	28 (90.3)	1.597^Y	0.206
Divorced/separated	2 (4.0)	48 (96.0)	0.310^Y	0.578
Family type				
Monogamous	32 (3.8)	817 (78.8)	0.013	0.910
Polygamous	9 (3.9)	220 (21.1)		
Live with parents				
Yes	39 (3.9)	954 (96.1)	0.187^Y	0.665
No	2 (4.9)	83 (96.1)		
Parent live together				
Yes	36 (3.8)	910 (96.2)	0.000	0.992
No	5 (3.8)	127 (96.2)		
Number of siblings				
<4	27 (4.1)	565 (95.4)	2.493^Y	0.477
4–6	13 (3.1)	406 (96.9)	1.373	0.241
7–10	0 (0.0)	57 (100.0)	0.838^Y	0.360
>10	1 (10.0)	9 (90.0)	0.984^Y	0.321

*Statistical significance (P<0.05), Y: Yates corrected Chi-square

Table 6: Binomial logistic regression of sociodemographic characteristics of the respondents and ODD

Variable	*B*	*95% CI*		*OR*	*P-value*
Gender					
Female					
Male	1.001	1.350	5.490	2.722	0.005

B: Coefficient of logistic regression, CI: Confidence interval, OR: Odd ratio

Sociodemographic Correlations with ODD

Table 7 presents the results of the correlation analysis examining the relationships between socio-demographic characteristics and ODD among the study respondents. The Spearman correlation coefficient (r) and the corresponding *P*-values are reported to assess the strength and statistical significance of these relationships. The correlation between age and ODD was found to be statistically non-significant (r = 0.015, *P* = 0.633), indicating that there is no significant linear relationship between age and the presence of ODD among the respondents.

The correlation between social class and ODD was also non-significant (r = –0.012, *P* = 0.979), suggesting that there is no significant linear association between social class (with lower social class as the reference) and ODD. The correlation between attending a public school and ODD was statistically significant but weak (r = 0.044, *P* = 0.153), indicating that there is a slight positive relationship between attending a public school and the presence of ODD.

The correlation between male gender and ODD was statistically significant (r = 0.009, *P* = 0.004), suggesting a weak positive association between being male and the presence of ODD. The correlation between belonging to a monogamous family and ODD was statistically non-significant (r = 0.003, *P* = 0.913), indicating that there is no significant linear relationship between family type (with a monogamous family as the reference) and ODD.

In summary, the correlation analysis indicates that age and social class are not significantly correlated with ODD among the study respondents. While there is a statistically significant but weak positive correlation between male gender and ODD, the correlations between type of school (public school) and family type (monogamous family) with a ODD are not significant.

Discussion

The sociodemographic insights garnered from this study have far-reaching implications, as they provide a nuanced understanding of the JSS student population in Ilorin and how it relates to ODD. These findings resonate with various aspects of related research, contributing to a broader comprehension of ODD and its multifaceted nature.

Starting with the socio-demographic profile of the student population, the concentration of students between the ages of 13 and 15 underscores the importance of early adolescence in the context of ODD.[17] This finding aligns with established research highlighting early adolescence as a crucial period for the emergence of ODD symptoms.[18] The study's recognition of this developmental phase's significance strengthens our understanding of ODD's onset and prevalence during this transitional period.

Table 7: Correlation of sociodemographic characteristics and ODD among respondents

Variables	*Oppositional defiant disorder*	
	R	*P-value*
Age	0.015	0.633
Social class (ref: lower)	–0.012	0.979
Public school	0.044	0.153
Male gender	0.009	0.004
Monogamous family	0.003	0.913

r: Spearman correlation coefficient

In terms of school type, the emphasis on inclusive policies and the distribution between public and private schools corresponds with broader research on ODD in educational settings.[19] It reinforces the notion that ODD is not limited to specific school types but can manifest in both public and private institutions.[20] This alignment supports the need for adaptable interventions that cater to diverse school environments.[21]

The study's attention to gender balance and the gender-specific prevalence of ODD echoes previous research that consistently identified a higher prevalence of ODD among males. This observation underscores the importance of considering gender-specific factors when assessing and addressing ODD in JSS students.[22] It aligns with existing literature, emphasizing the unique challenges and risk factors associated with ODD in both male and female students.[23]

Regarding the distribution of students by grade level, the recognition of variations in ODD prevalence across different JSS classes adds depth to our understanding of ODD's evolving nature as students' progress through their education.[24] This finding is in line with longitudinal studies that have explored ODD trajectories, emphasizing that ODD is not static but changes over time.[25] It emphasizes the importance of examining ODD patterns at various educational stages.[26]

Moving on to family sociodemographics, the acknowledgment of cultural and religious diversity within the student population resonates with research highlighting the need for culturally sensitive interventions.[27] Understanding the cultural backgrounds of students allows for the development of interventions that respect and align with their cultural and religious values.[28]

The study's exploration of socioeconomic influences through the prevalence of upper and middle-class families contributes to the socioeconomic dimension of ODD research.[29] This aligns with studies that have examined the role of socioeconomic status in ODD and emphasizes the importance of considering socioeconomic factors when addressing this disorder.[30-35]

The absence of significant associations between ODD and factors like parental marital status, family type, living arrangements, and the number of siblings adds a layer of complexity to our understanding of ODD correlates. This finding implies that ODD may manifest independently of these family-related factors, highlighting the need to explore additional potential influences on ODD within the specific context of JSS students in Ilorin.[36-37]

Conclusion

These findings not only provide valuable insights into the sociodemographic landscape of JSS students in Ilorin but also connect with and enhance existing knowledge in the field of ODD research. They underscore the importance of early adolescence, gender-specific considerations, and adaptable interventions across diverse school types while deepening our understanding of ODD's multifaceted nature within the context of family dynamics and socioeconomic influences. These connections enrich the applicability of the study's findings and emphasize the need for comprehensive, context-aware strategies when addressing ODD in this population.

References

1. Sarmiento C, Lau C. Diagnostic and statistical manual of mental disorders: DSM-5. In: The Wiley Encyclopedia of Personality and Individual Differences: Personality Processes and Individual Differences. United States: Wiley; 2020. p. 125-9.
2. Chen H, He T, Xu M, Zhao J, Li L, Lin X. Children's oppositional defiant disorder symptoms make parents difficult to be nice: Longitudinal association among parent emotion regulation, child emotion regulation and children's oppositional defiant disorder symptoms in Chinese children with oppositional defiant disorder. Clin Child Psychol Psychiatry 2022;27:1155-69.
3. Beelmann A, Arnold LS, Hercher J. Parent training programs for preventing and treating antisocial behavior in children and adolescents: A comprehensive meta-analysis of international studies. Aggress Violent Behav 2022;68:101798.
4. Racine N, Cooke JE, Eirich R, Korczak DJ, McArthur B, Madigan S. Child and adolescent mental illness during COVID-19: A rapid review. Psychiatry Res 2020;292:113307.
5. Gutvajn NM, Lepojević MM. Parental monitoring, behavioral problems, and school achievement of Belgrade secondary school students. Teach Innov 2020;33:1-13.
6. Evans SC, Roberts MC, Keeley JW, Rebello TJ, de la Peña F, Lochman JE, *et al*. Diagnostic classification of irritability and oppositionality in youth: A global field study comparing ICD-11 with ICD-10 and DSM-5. J Child Psychol Psychiatry 2021;62:303-12.
7. Lowet DS, Vaida F, Hesselink JR, Ewing-Cobbs L, Schachar RJ, Chapman SB, *et al*. Novel oppositional defiant disorder or conduct disorder 24 months after traumatic brain injury in children and adolescents. J Neuropsychiatry Clin Neurosci 2024;36:53-62.
8. World Health Organization. Helping Adolescents Thrive Toolkit: Strategies to Promote and Protect Adolescent Mental Health and Reduce Self-harm and other Risk Behaviors. Geneva: World Health Organization; 2021.
9. Goldschmidt T, Pedro A. South African pre-school teacher perceptions of socio-emotional development for school readiness: An exploratory study. J Psychol Afr 2020;30:174-8.
10. Okafor IP. Influence of socio-cultural background of parents on girl-child education in Ilorin metropolis, Nigeria. EDUCARE 2020;13:49-60.
11. Afolabi MA. Peoples 'social welfarism and traditional medicine practice in the urban local government of Osun State, Nigeria. Fuoye J Public Admin Manag 2023;1.
12. Chou WJ, Hsiao RC, Chang CC, Yen CF. Predictors of depressive symptoms in caregivers of children with attention-deficit/hyperactivity disorder: A one-year follow-up study. Int J Environ Res Public Health 2021;18:8835.
13. Owan F. Emotional Intelligence and Students' Academic Achievement in Chemistry in Senior Secondary Schools; 2022. Available from: https://ssrn4066519
14. Greenley R, Tamamang R, Koroma A, Fasoranti B, Munetsi E, Chimoko H, *et al*. Suceed Africa: Protocol for Multi-method Pilot Study of a Commuity-based Intervention for People with Psychosis in West and Southeast Africa. North Carolina: Research Square; 2023.
15. Kushal SA, Amin YM, Reza S, Hossain FB, Shawon MS. Regional and sex differences in the prevalence and correlates of early sexual initiation among adolescents aged 12–15 years in 50 countries. J Adolesc Health 2022;70:607-16.
16. Okafor KC, Bimba JS, Adekeye OA, Obateru AP, Idoko LO. The prevalence and pattern of use of alcohol among undergraduate students in Jos Plateau State, Nigeria. Open J Prev Med 2022;12:141-54.
17. Carlisi CO, Moffitt TE, Knodt AR, Harrington H, Ireland D, Melzer TR, *et al*. Associations between life-course-persistent antisocial behaviour and brain structure in a population-representative longitudinal birth cohort. Lancet Psychiatry 2020;7:245-53.
18. Bosak J, Kulich C. Gender similarities hypothesis. In: Encyclopedia of Sexual Psychology and Behavior. Cham: Springer International Publishing; 2023. p. 1-5.
19. Eccles JS, Wigfield A. Expectancy-value theory to situated expectancy-value theory: Reflections on the legacy of 40+ years of working together. Motiv Sci 2023;9:1.

20. Göbel K, Preusche ZM. Emotional school engagement among minority youth: The relevance of cultural identity, perceived discrimination, and perceived support. Intercult Educ 2019;30:547-63.
21. Donnellan MB, Martin MJ, Senia JM. Genetic influences on the interactionist model of socioeconomic development: Incorporating polygenic scores for educational attainment into developmental research using the Family Transitions Project (FTP). Dev Psychol 2021;57:180.
22. Garcia OF, Serra E, Zacares JJ, Calafat A, Garcia F. Alcohol use and abuse and motivations for drinking and non-drinking among Spanish adolescents: Do we know enough when we know parenting style? Psychol Health 2020;35:645-64.
23. Henry DA, Betancur Cortés L, Votruba-Drzal E. Black-White achievement gaps differ by family socioeconomic status from early childhood through early adolescence. J Educ Psychol 2020;112:1471.
24. Berkery E, Ryan NF. Think manager-Think male or female: Exploring the content of gendered stereotypes of the managerial role among undergraduate business students in Ireland over a 10-year period. Gender Manag Int J 2023;39:328-44.
25. Selvitopu A, Kaya M. A meta-analytic review of the effect of socioeconomic status on academic performance. J Educ 2021;203:1-13.
26. Roos LE, Salisbury M, Penner-Goeke L, Cameron EE, Protudjer JL, Giuliano R, *et al*. Supporting families to protect child health: Parenting quality and household needs during the COVID-19 pandemic. PLoS One 2021;16:e0251720.
27. Seleem MA, Amer RA, Elhosary M, Saada S, Hamza EA, Elfert Y, *et al*. Psychometric properties and cross-cultural comparison of the Arabic version of the Child Behavior Checklist (CBCL), Youth Self Report (YSR), and Teacher's Report Form (TRF) in a sample of Egyptian children. Middle East Curr Psychiatry 2023;30:61.
28. Class QA, Van Hulle CA, Rathouz PJ, Applegate B, Zald DH, Lahey BB. Socioemotional dispositions of children and adolescents predict general and specific second-order factors of psychopathology in early adulthood: A 12-year prospective study. J Abnorm Psychol 2019;128:574.
29. López-Romero L, Romero E, Colins OF, Andershed H, Hare RD, Salekin RT. Proposed Specifiers for Conduct Disorder (PSCD): Preliminary validation of the parent version in a Spanish sample of preschoolers. Psychol Assess 2019;31:1357.
30. Lei M, Lei S, Liang T, Xia W, Ballard P. Exploring the impact of socioeconomic status and physical play on early childhood development. J Int Educ Pract 2023;6:19-32.
31. Greve W. Adaptation across the lifespan: Towards a processual evolutionary explanation of human development. Integr Psychol Behav Sci 2023;57:1119-39.
32. Cicchetti D. A Multiple Levels of Analysis Developmental Psychopathology Perspective on Adolescence and Young Adulthood. United States: American Psychological Association; 2023.
33. Drogomyretska K, Fox R, Colbert D. Brief report: Stress and perceived social support in parents of children with ASD. J Autism Dev Disord 2020;50:4176-82.
34. Enders CK. Applied Missing Data Analysis. United States: Guilford Press; 2010.
35. Nabunya P, Byansi W, Bahar OS, Namuwonge F, Atwebembere R. Emotional and behavior difficulties and the mental health of caregivers of adolescents living with HIV. J Child Fam Stud 2023;32:3766-74.
36. Turgumbayev M, Rima D, Dossanov M, Baisalov A, Beaver KM. Adolescent delinquency and adulthood economic disadvantage and job benefits: Results from a longitudinal sample of males and females. Int J Offender Ther Comp Criminol 2022;14:0306624X221110802.