

PSYCHO-DEMOGRAPHIC PREDICTORS OF AGGRESSION AND BULLYING AMONG STUDENTS WITH AUTISM SPECTRUM DISORDER

¹Oluseyi Akintunde Dada & ²Johnson Tunde Oyeleke

¹Department of Special Education, University of Calabar, Nigeria.

²Department of Psychology, Lead City University, Ibadan, Nigeria

(Corresponding email: seyidada23@gmail.com; oyeleke.johnson@lcu.edu.ng,
Mobile: +234 803 357 4471)

ABSTRACT

This study examined psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder (ASD) in Lagos State. Three hypotheses that guided the study were tested at 0.05 alpha level. A survey design was employed with a sample of 173 students with ASD, aged 6-17 years. Data was collected using adapted questionnaires and a researcher-designed scale. Data analysis was done using Multivariate Analysis of Variance (MANOVA). Results revealed that sensory sensitivity significantly influenced combined aggression and bullying behaviours (Wilks' $\Lambda=0.708, F(2,169)=34.891, p<0.001$), accounting for 29.2% of the variance. Students with high sensory sensitivity exhibited higher bullying ($\bar{x}=38.23$) and aggression ($\bar{x}=29.31$). Similarly, repetitive behaviour significantly influenced combined aggression and bullying (Wilks' $\Lambda=0.807, F(2,170)=20.371, p<0.001$), explaining 19.3% of the variance; those with high repetitive behaviours showed more bullying ($\bar{x}=38.027$) and aggression ($\bar{x}=28.616$). While age did not significantly influence the combined behaviours (Wilks' $\Lambda=0.973, F(2,170)=2.334, p=0.100$), it had a significant effect on aggression ($F=4.695, p=0.032$). The study concludes that sensory sensitivity and repetitive behaviour are key predictors, emphasizing the need for targeted interventions such as adapted classroom settings to reduce sensory overload and behavioural interventions for students with autism spectrum disorder (ASD).

Keywords: Age, Aggression, Autism Spectrum Disorder, Bullying, Repetitive Behaviour, Sensory Sensitivity

Editor-in-Chief

Prof. Henry Odhianosen Imhonde

Assistant Editor-in-Chief

Dr. Oyeleke Johnson

Associate Editors: Ajibola Abdulrahmon Ishola, Dr. Leonard Orji, Dr. Daniel Kumuyi, Dr. Chinyere Okonkwo, Dr. Juliana Pwajok, Dr.

Samson Olowo Kolawole, Dr. Victor Onyecho

Consulting Editors:

Prof. Peter. O. Ebigbo, Prof. Ebenezer. O. Akinowo, Prof. Helen O. Osinowo, Prof. Onaolopo K. Taiwo, Prof. Erhabor Idemudia, Prof. Harry Obi Nwosu, Prof. Obiageli Omeje, Prof. Benjamin O. Olley, Prof. Gboyega Emmanuel Abikoye, Prof. Bolade O. Mokuolu

INTRODUCTION

Bullying and aggressive behaviour among adolescents with autism spectrum disorder (ASD) have become increasingly significant in academic and clinical discussions. The ASD is a neurodevelopmental disorder causing communication difficulties, repetitive behaviours, and sensory sensitivities (Dushka, 2022; Dada, 2018). Due to their behavioural differences, students with autism often experience social exclusion and bullying, defined as repeated aggressive acts against vulnerable individuals (Matthias, LaVelle, Johnson, Wu & Thurlow, 2021).

While research on autism and bullying is extensive in developed nations, knowledge gaps exist in developing countries like Nigeria. Lagos State provides a formal setting for the care and educational development of children with ASD as well as insight into how therapies are provided within Nigeria's educational context. Limited resources, inadequate teacher training, and cultural stigmas create barriers for students with ASD (Eke & Adegbite, 2018). These challenges are influenced by sensory sensitivity, repetitive behaviour and age. The sensory environment of schools can be particularly challenging due to large class sizes, limited infrastructure, and a lack of accommodations for sensory

needs (Baker, 2018). These conditions exacerbate the sensory sensitivities of students with ASD, creating a fertile ground for bullying. Dada and Amodu (2017) advocated intervention for children with ASD. Understanding the interplay between sensory sensitivity and bullying is essential for designing interventions that mitigate sensory triggers and promote a more inclusive educational environment.

Repetitive behaviours and a preference for routine are hallmark features of autism that can significantly influence social interactions (Baker, 2018). These behaviours, which may include repetitive movements, uncoordinated speech patterns, or strict adherence to routines, often attract negative attention from peers who may perceive them as odd or disruptive (Carter, 2020). In the context of bullying, repetitive behaviours can serve as triggers for mockery or exclusion, these may further cause isolation of students with autism (Brown, 2022). There is need to check how much influence the repetitive behaviours have on prompting bullying in the classroom. This will help to develop appropriate intervention for controlling bullying among children with ASD.

Aggression and bullying are social pervasive problems in schools worldwide, and students with autism spectrum disorder

Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder

(ASD) are disproportionately affected. Among students with ASD in Nigeria, aggression and bullying takes on unique dimensions due to the interplay of psychological, social, cultural and systemic challenges. Despite global efforts to promote inclusive education, the Nigerian educational system continues to grapple with the complexities of integrating students with autism into mainstream classrooms for appropriate inclusive education system. Schools in Lagos State being the microcosmic of Nigeria are expected to be inclusive but they are without adequate professional preparation, skills and training, resources, facilities or infrastructure, thereby exacerbating vulnerability to aggression, bullying, and social exclusion of students with ASD.

Aggression and bullying are social pervasive problems in schools worldwide, and students with autism spectrum disorder (ASD) are disproportionately affected. Among students with ASD in Nigeria, aggression and bullying takes on unique dimensions due to the interplay of psychological, social, cultural and systemic challenges. Despite global efforts to promote inclusive education, the Nigerian educational system continues to grapple with the complexities of integrating students with autism into mainstream classrooms for appropriate inclusive

education system. Schools in Lagos State being the microcosmic of Nigeria are expected to be inclusive but they are without adequate professional preparation, skills and training, resources, facilities or infrastructure, thereby exacerbating vulnerability to aggression, bullying, and social exclusion of students with ASD.

Consequently, most parents and teachers reported frustration over aggression or bullying behaviour experiences on their children on the spectrum and are eager to have these experiences becoming a thing of past. Such behaviours not only make them victims of bullying but also place them in roles as aggressors, creating a cyclical dynamic that perpetuates social conflict and emotional distress in an inclusive classroom setting which is now a global demand. A targeted way out of the menace of aggression and bullying among students on the spectrum is to investigate the triggers of aggressive and bullying behaviours such as nonverbal communication and social relationship challenges and the gender is considered as moderator variable.

Autism spectrum disorder (ASD) is a neurodevelopmental condition that impacts around 0.72% of the global population (Talantseva, Romanova, Shurdova, Sologub, Titova, Kleeva, & Grigorenko, 2023). Aggression and

Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder

bullying are significant issues associated with autism spectrum disorder (ASD), frequently affected by sensory sensitivity, repetitive behaviours, and age. Sensory over-responsivity, prevalent in individuals with ASD, is significantly correlated with increased anxiety and hostility. Mazurek (2017) discovered that sensory processing challenges substantially influence behavioural dysregulation, especially when combined with anxiety, potentially intensifying violent behaviours. Motlaghi and Jokar (2015) identified a direct correlation between increased sensory sensitivity and bullying victimization in children with ASD, suggesting that sensory challenges may elevate the risk of aggression and vulnerability to bullying (Ajemba & Chujor, 2023; Hassan, & Khairuddin, 2023).

Repetitive behaviours, a fundamental characteristic of ASD, significantly influence peer interactions. Turner-Brown (2019) highlighted that diminished cognitive flexibility, which contributes to repetitive behaviours, may obstruct adaptive responses in social contexts, potentially resulting in irritation and violence. South (2021) observed that these behaviours may lead to social isolation or misinterpretation by peers, creating an environment conducive to bullying. Boyd (2019) emphasized that

recurrent behaviours in peer relationships can be misinterpreted, leading to social rejection or conflict.

Age is a significant determinant affecting hostility and bullying. Research conducted by van Roekel (2020) indicated that aggressive behaviours in adolescents with ASD tend to escalate with age, particularly in reaction to ongoing peer rejection or bullying. Ojo (2019) identified gender variations in violent conduct, suggesting that age-related social dynamics may differently effect boys and girls with ASD. Moreover, Carter et al. (2020) revealed that prolonged exposure to bullying during developmental stages had persistent psychological repercussions, including higher aggression. Aggression in ASD is complex. Farmer and Aman (2016) identified sensory processing impairments, communication deficits, and age-related stress as important risk factors. Kerns (2019) hypothesized that aggression often comes from a mix of external stresses and internal regulatory issues.

Zablotsky et al. (2022) have revealed the high prevalence of bullying among children with ASD and its association with behavioural dysregulation. Effective intervention must consider these interrelated elements. Mindfulness-based therapies, as studied by Brown (2022), have showed potential in improving emotional

Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder

control. Moreover, comprehensive intervention models that address sensory demands, develop social awareness, and support age-appropriate coping mechanisms are crucial (Lecavalier, 2019; Anderson, Myles & Cherry, 2017). In summary, sensory sensitivity, repetitive conduct, and age all determine the violence and bullying experiences of students with ASD. An integrated understanding of these elements is crucial for establishing targeted treatments and promoting inclusive educational environments which Dada and Amodu (2017) advocated as intervention for students with ASD.

The major purpose of this study is to investigate psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder in Lagos State. Specific objectives of the study are to:

1. Inquire into the influence of sensory sensitivity on aggression and bullying among students with ASD in Lagos State.
2. Ascertain the influence repetitive behaviour on

aggression and bullying among students with ASD in Lagos State.

3. Examine the influence of age on aggression and bullying among students with ASD in Lagos State.

Hypotheses

The following hypotheses were tested at 0.05 level of significance:

1. Sensory sensitivity has significant influence on aggression and bullying among students with ASD in Lagos State.
2. Repetitive behaviour has significant influence on aggression and bullying among students with ASD in Lagos State.
3. Age has significant influence on aggression and bullying among students with ASD in Lagos State

METHOD

Design

A survey design incorporating multi-level variables was employed in the study.

Participants

The target population consisted of children aged 6 to 17 years with a dual diagnosis of autism spectrum disorder (ASD) in Lagos State. The exact size of the target population is undocumented; however, the

Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder

accessible population was estimated at 306, based on data from speech and language centers, special schools, orthopedic hospital schools, and inclusive units in primary schools.

The study sample comprised a cross-section of 173 children aged 6 to 17 years who had been diagnosed with ASD. This sample size was determined using the Taro Yamane formula for sample size calculation. Snowball sampling technique was utilized to select participants with ASD from various schools and rehabilitation centers.

Instruments

Three instruments were used for data collection: The Adapted Olweus Bully/Victim Questionnaire (AOBVQ) is an adaptation of the Revised Olweus Bully/Victim Questionnaire originally designed by Olweus (1996). The original instrument assesses experiences of bullying perpetration and victimization. The revised version typically includes approximately 40 items, with core scales for victimization and perpetration often comprising 8–10 items each in validated forms; adaptations may vary the exact number. Items are rated on a 5-point Likert scale (e.g., "It hasn't happened to me in the past couple of months," "Only once or twice," "2 or 3 times a month," "About once a week," "Several times a week"). Scores are

calculated separately for bully and victim sub-scales by summing or averaging relevant items; higher scores indicate greater involvement in bullying or victimization. Sample items include: "How often have you been bullied at school in the past couple of months?"; "I was called mean names, was made fun of, or teased in a hurtful way."; and "I was hit, kicked, pushed, shoved around, or locked indoors."

The original and revised versions demonstrate good reliability (Cronbach's α typically 0.80–0.90 for sub-scales) and validity across cultures. In the current study, the adapted version was re-validated by experts, with reliability reported as 0.84. The Aggression Questionnaire (AAQ) was developed by Buss and Perry (1992) as a self-report measure of trait aggression. It consists of 29 items rated on a 5-point Likert scale ranging from 1 ("Extremely uncharacteristic of me") to 5 ("Extremely characteristic of me"). Total aggression score is the sum of all items; four sub-scale scores are calculated: Physical Aggression (9 items), Verbal Aggression (5 items), Anger (7 items), and Hostility (8 items). Higher scores indicate greater aggression. Sample items include: "Once in a while I can't control the urge to strike another person." (Physical Aggression); "I tell my friends openly when I disagree with them." (Verbal Aggression); "I have trouble

Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder

controlling my temper." (Anger); and "I wonder why sometimes I feel so bitter about things." (Hostility). It shows high internal consistency (Cronbach's $\alpha > 0.80$ for total and subscales) and good construct and convergent validity. In the current study, the adapted version was re-validated by experts, with reliability reported as 0.85. The Psychosocial Dynamics of Autism Spectrum Disorder Observation Rating Scale is an observation-based instrument developed by the researcher to assess psychosocial aspects related to autism spectrum disorder (ASD). The number of items is not specified in available details. It employs an observation rating scale (specific format not detailed; likely Likert-type based on similar ASD tools). Overall scale score is computed (likely summed or averaged); higher scores indicate greater presence or severity of observed psychosocial dynamics in ASD. Sample items are not available in provided details. Content and construct validity were established with expert input. Reliability is reported as 0.95 for the overall scale, indicating excellent internal consistence. The first two instruments were adaptations of standardized questionnaires widely accepted and used across cultures. They were re-validated by five experts (three in clinical psychology and two in special needs education), with the final draft

produced after thorough review and consensus on items and response options.

Content and construct validity for the first two instruments were established with input from the same five experts in psychology and special education. Reliability coefficients were as follows: Adapted Aggression Questionnaire (0.85), Adapted Olweus Bully/Victim Questionnaire (0.84), and Psychosocial Dynamics of Autism Spectrum Disorder Observation Rating Scale (0.95 overall).

Procedure

The researcher visited schools to obtain permission and trained research assistants on data collection procedures. Data were collected using survey and observation techniques, followed by appraisal of the collected data.

Data Analysis

Data were analyzed using descriptive statistics (mean and standard deviation) and inferential statistics (correlation analysis and multivariate analysis of variance; MANOVA). Means and standard deviations described central tendency and variability of responses, respectively. Correlation analysis established linearity between the two dependent variables to satisfy MANOVA assumptions. MANOVA was selected due to the involvement of two dependent variables

Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder

sharing common conceptual behaviors and its ability to detect group differences.

Ethical Considerations

Ethical procedures were strictly followed. Informed consent was obtained from respondents, and participation was voluntary. Efforts ensured respondents

understood the study, with parental consent obtained prior to participation. Anonymity and confidentiality were maintained during data collection, and data were stored securely.

RESULTS

Results

Table 1: *Mean and Standard Deviation of Demographic Data*

SN	Variable	N	Mean	Standard Dev.
1.	Nonverbal communication	171	14.861	3.817
2.	Repetitive Behaviour	174	14.902	3.663
3.	Age	174	1.32	.469

Table 1 presents the summary of the descriptive statistics of the demographic data of the variables. From the table, the mean values of the independent variables indicate that all the variables are relatively high: sensory senility ($\bar{x} = 14.861$), and repetitive behaviour ($\bar{x} = 14.902$) if compared with a statistical mean of 12.5 taken a minimum and maximum scores of

5 and 20. This implies that the nonverbal communication challenge and social relationship challenges are relatively high among children on the spectrum. Age distribution shows a good spread between the two gender ($\bar{x} = 1.32$; $SD = .469$).

Table 2: *Summary of One-Way MANOVA Outputs of the Influence of Sensory Sensitivity on Aggression and Bullying*

Section 1. Descriptive Statistics of Sensory Sensitivity Level on Aggression and Bullying					
	Sensory sensitivity	Mean	Std. Deviation	N	%
Bullying Behaviour	Low	32.12	7.074	96	55.8
	High	38.23	5.640	76	44.2
	Total	34.82	7.142	172	100.0
Aggressive Behaviour	Low	22.83	5.639	96	55.8
	High	29.31	4.636	76	44.2
	Total	25.69	6.125	172	100.0
Section 2. Box's Test of Equality of Covariance Matrices^a					
	Box's M	F	df1	df2	Sig.
	6.090	2.004	3	6707 727. 891	.111

Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder

Section 3. Multivariate Test^b

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Wilks'	.708	34.891 ^b	2.00	169.000	.000	.292
Lambda						

Section 4. Levene's Test of Equality of Error Variances ^a (based on mean)

	Levene Statistic	df1	df2	Sig.
Bullying Behaviour	6.274	1	170	.130
Aggressive Behaviour	11.144	1	170	.100

Section 5. Tests of Between-Subjects Effects

Source	Dependent Variable	SS	Squares	df	MS	F	Sig.	Partial Eta Squared
Sensory Sensitivity Level	Bullying Behaviour	1584.531		1	1584.531	37.726	.000	.182
	Aggressive Behaviour	1782.525		1	1782.525	65.396	.000	.278

a. R Squared = .182 (Adjusted R Squared = .177) b. R Squared = .278 (Adjusted R Squared = .274)

Hypothesis 1 which state that sensory sensitivity has significant influence on aggression and bullying among students with ASD was tested using the One-Way MANOVA. Having satisfied all the assumptions of MANOVA, the summary of the results of the data analyses were given in table 4.4. The summarized table 4.4 presents both the descriptive and the inferential analyses of the data collected under 5 sections. Section 1 presents the mean and standard deviation of the participant's sensory sensitivity against aggression and bullying. The participants

were binned into two groups, low and high sensory sensitive participants. Considering the sensory sensitivity, there are 96 (55.8%) and 72 (44.2%) participants who presents with low and high sensory sensitivity. This implies that with respect to sensory sensitivity, there are more children with low sensory sensitivity than those with high sensory sensitivity. The respective mean value $\bar{x} = 32.12$ and $\bar{x} = 38.23$ are for low and high sensory sensitivity against bullying and $\bar{x} = 22.83$ and $\bar{x} = 29.31$ against aggression.

Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder

Given the Box's M Sig, section 2 of the data analysis show that the assumption of homogeneity of variance-covariance matrix was not broken. value= .111 which is greater than .001 a criterion value for which if the Box's M Sig value is lower than will indicate violation. Section 3 is the actual section that is used in testing the hypothesis using the Wilks' Lambda. At $F_{(2,172)} = 34.891$; $p = .000$; Wilks' Lambda = .708. This indicates a statistically significant influence of sensory sensitivity level on the combined aggression and bullying behaviours of the participants. The partial Eta squared value of .292 indicate that the level of sensory sensitivity accounts for 29.2% of the variance of the combined behaviour of aggression and bullying.

Section 4 of the output indicates that there is no violation of test of equality of the error variance on the aggression and bullying across the two levels of sensory

sensitivity since the significant values are both greater than .05 for the two dependent variables with $p = .10$ and $.13$ for aggression and bullying respectively. Section 5 presents the between-subjects effects. This results presents the separate influence of the levels of sensory sensitivity on the dependent variables. At df of 2,170; $F = 37.726$; and 65.396 , $p = .000$ for bullying and aggression respectively. This implies that there is significant influence of sensory sensitivity on bullying and aggression among kids with ASD.

Therefore, the hypothesis 1 is retained, that sensory sensitivity has significant influence on aggression and bullying among students with ASD. Comparing the group mean in section 1, the estimated marginal means is a clear evidence that those with high sensory sensitivity exhibit more aggressive and bullying behaviours significantly than those with low sensory sensitivity.

Table 3: *Summary of One-Way MANOVA Outputs of the Influence of Repetitive Behaviours on Aggression and Bullying*

Section 1. Descriptive Statistics of Repetitive Behaviours Level on Aggression and Bullying					
	Repetitive Behaviour	Mean	Std. Deviation	N	%
Bullying Behaviour	Low	32.500	6.676	100	57.8
	High	38.027	6.480	73	42.2
	Total	34.832	7.122	173	100.0
Aggressive Behaviour	Low	23.580	5.514	100	57.8
	High	28.616	5.697	73	42.2
	Total	25.705	6.108	173	100.0

Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder

Section 2. Box's Test of Equality of Covariance Matrices^a

Box's M	F	df1	df2	Sig.
.308	.101	3	2329786.494	.959

Section 3. Multivariate Test^b

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Wilks' Lambda	.807	20.371 ^b	2.000	170.000	.000	.193

Section 4. Levene's Test of Equality of Error Variances^a (based on mean)

	Levene Statistic	df1	df2	Sig.
Bullying Behaviour	.810	1	171	.369
Aggressive Behaviour	.736	1	171	.392

Section 5. Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Repetitive Behaviour	Bullying Behaviour	1289.194	1	1289.194	29.643	.000	.148
	Aggressive Behaviour	1070.345	1	1070.345	34.226	.000	.167

a. R Squared = .148 (Adjusted R Squared = .143) b. R Squared = .167 (Adjusted R Squared = .162)

Hypothesis 2 which state that repetitive behaviours have significant influence on aggression and bullying among students with ASD was tested using the One-Way MANOVA. Having satisfied all the assumptions of MANOVA, the summary of the results of the data analyses were given in table 4.5. The summarized table 4.5 presents both the descriptive and the inferential analyses of the data under 5 sections. Section 1 presents the mean and standard deviation of the participants' repetitive behaviours. The participants were binned into two groups, low and high

repetitive behaviours participants. Considering the repetitive behaviours, there are 100 (57.8%) and 73 (42.2%) participants who presents with low and high repetitive behaviours respectively. This implies that with respect to repetitive behaviours, there are more children with low repetitive behaviours than those with high repetitive behaviours. The respective mean values are $\bar{x} = 32.50$ and $\bar{x} = 38.027$ for low and high repetitive behaviours against bullying and $\bar{x} = 23.583$ and $\bar{x} = 28.616$ for low and high against aggression.

Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder

Given the Box's M Sig, section 2 of the data analyses shows that the assumption of homogeneity of variance-covariance matrix was not broken with value= .959 which is greater than .001 Since .001 is the critical value for which if the Box's M Sig value is lower than will indicate violation. Section 3 is the actual section that is used in testing the hypothesis using the Wilks' Lambda. At $F_{(2,172)} = 20.371$; $p = .000$; Wilks' Lambda= .807. This indicates a statistically significant influence of level of the repetitive behaviours on the combined aggression and bullying behaviours of the participants. The partial Eta squared value of .193 indicate the level of repetitive behaviours accounts for 19.3% of the variance of the combined behaviour of aggression and bullying.

Section 4 of the output indicates that there is no violation of test of equality of the error variance on the aggression and bullying across the two levels of repetitive behaviours since the significant values are both greater than .05 for the two dependent variables with

$p = .392$ and $.369$ for aggression and bullying respectively. Section 5 presents the between-subjects effects. This result presents the separate influence of the levels of repetitive behaviours on the dependent variables. At df of 2,170; $F = 29.643$; and 34.226, $p = .000$ for bullying and aggression respectively. This suggests that bullying and violence in kids with autism spectrum condition are significantly influenced by repetitive behaviour. Therefore, the hypothesis 2 is retained. Repetitive behaviour accounted for 14.8% and 16.7% (from the Partial Eta Square) of the variance on bullying and aggressive behaviours of the children on the spectrum. Conclusively, repetitive behaviour has significant influence on aggression and bullying among students with ASD. Comparing the group mean in section 1, the estimated marginal means is a clear evidence that those with high repetitive behaviour exhibit more aggressive and bullying behaviours significantly than those with low repetitive behaviour.

Table 4: Summary of One-Way MANOVA Outputs of the Age on Aggression and Bullying
Section 1. Descriptive Statistics of Age Level on Aggression and Bullying

	Age	Mean	Std. Dev	N	%
Bullying Behaviour	Age 6 - 12	34.322	7.559	118	68.2
	Age 13 - 17	35.927	5.999		
	Total	34.832	7.122		
Aggressive Behaviour	Age 6 - 12	25.025	6.134	118	68.5
	Age 13 - 17	27.163	5.842		
	Total	25.705	6.108		

Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder

Section 2. Box's Test of Equality of Covariance Matrices^a

Box's M	F	df1	df2	Sig.
3.826	1.356	3	253722.074	.288

Section 3. Multivariate Test^b

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Wilks' Lambda	.973	2.334 ^b	2.000	170.000	.100	.027

Section 4. Levene's Test of Equality of Error Variances^a (based on mean)

	Levene Statistic	df1	df2	Sig.
Bullying Behaviour	3.517	1	171	.062
Aggressive Behaviour	.573	1	171	.450

Section 5. Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Age	Bullying Behaviour	96.667	1	96.667	1.916	.168	.011
	Aggressive Behaviour	171.514	1	171.514	4.695	.032	.027

a. R Squared = .011 (Adjusted R Squared = .005) b. R Squared = .027 (Adjusted R Squared = .021)

Hypothesis 3 which state that age has significant influence on aggression and bullying among students with ASD. The hypothesis was tested using the One-Way MANOVA. Having satisfied all the assumptions of MANOVA, the summary of the results of the data analyses were given in table 4.11. The summarized table presents both the descriptive and the inferential analyses of the data under 5 sections.

Section 1 presents the mean and standard deviation of the participants' age level against aggression and bullying. The participants were in two groups, age between 6 and 12, and age between 13 and 17. Considering the age levels, there are

118(68.2%) and 55(31.8%) age 6-12 years and age 13-17 respectively against bullying and aggression. This implies that, there are more participants in age 6-12 than age 13-17 with ASD. The respective mean values are $\bar{x} = 34.32$ and $\bar{x} = 35.92$ for age 6-12 and age 13-17 respectively against bullying and $\bar{x} = 20.02$ and $\bar{x} = 27.16$ for age 6-12 and age 13-17 respectively against aggression.

The section 2 of the data analyses indicate that the assumption of homogeneity of variance-covariance matrix was not violated given the Box's M Sig. value= .288. Since .001 is the critical value for which if the Box's M Sig value is lower

Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder

than will indicate violation. Section 3 is the actual section that is used in testing the hypothesis using the Wilks' Lambda. At $F_{(2,172)} = 2.334$; $p = .100$; Wilks' Lambda = .973. This indicates that there is no statistical significant influence of age on the composite of aggression and bullying behaviours of the participants. The partial Eta squared value of .027 indicate that the gender of the participants accounts for only 2.7% of the variance of the combined behaviour of aggression and bullying.

Section 4 of the output indicates that there is no violation of test of equality of error variances on the data for bullying and aggression on age. Since, the significant values for both dependent variables ($p = .062$ for bullying and $p = .450$ for aggression) are both greater than .01, which is the most conservative alpha level recommended.

DISCUSSION

The study found that sensory sensitivity has significant influence on aggression and bullying among students with ASD as those with high sensory sensitivity exhibited more aggressive and bullying behaviours significantly than those with low sensory sensitivity. This findings is supported by Mazurek (2017) who found that sensory processing difficulties significantly contribute to behavioural dysregulation, particularly when coupled

Section 5 presents the between-subjects effects. This results present the separate influence of the age level on the dependent variables. At df of 2,170; $F = 1.916$, $p = .168$; and $F = 4.695$, $p = .032$ for bullying and aggression respectively. This implies that there is no significant influence of age on bullying but there is significant influence of age on aggression among children with autism spectrum disorder. The age level accounted for 1.1% and 2.7% (from the Partial Eta Square) of the variance on bullying and aggressive behaviours of the children on the spectrum. Conclusively, age has no significant influence on combined aggression and bullying behaviour but when consider separately while age level has no significant influence on bullying, there is significant influence on aggressive behaviours of students with ASD.

with anxiety, which may exacerbate aggressive tendencies. Similarly, Motlaghi et al. (2015) reported a direct relationship between heightened sensory sensitivity and bullying victimization among children with ASD, indicating that sensory issues may increase both the risk of aggression and susceptibility to being bullied. Sensory sensitivity, whether hyper- or hypo-responsiveness, is a core feature of ASD and significantly shapes how students interact

Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder

socially. For instance, hyper-sensitivity to auditory stimuli in noisy classrooms can overwhelm students, leading to irritability and aggressive outbursts³. These responses are not necessarily rooted in hostility but may reflect attempts to manage sensory overload.

It was found that repetitive behaviour has significant influence on aggression and bullying among students with ASD as those with high repetitive behaviour exhibit more aggressive and bullying behaviours significantly than those with low repetitive behaviour. The work of Turner-Brown (2019) emphasized that reduced cognitive flexibility, which underlies repetitive behaviours, can hinder adaptive responses in social settings, potentially leading to frustration and aggression. Similar to this finding is South (2021) who further noted that these behaviours could result in social isolation or misinterpretation by peers, fostering conditions ripe for bullying. Boyd et al. (2019) highlighted that repetitive actions

Conclusion

The study concludes that sensory sensitivity and repetitive behaviour significantly contribute to the levels of aggression and bullying behaviours in students with ASD while gender only influence aggression, not bullying. These findings emphasize the importance of

during peer interactions may be misunderstood, contributing to social rejection or conflict.

According to the study, age has a substantial impact on the aggression of children with autism spectrum disorder (ASD), but not on bullying. This aligns with recent research by van Roekel (2020) which showed that as adolescents with ASD grow older, aggressive behaviours tend to increase, especially in response to persistent peer rejection or bullying. Ojo (2019) reported age differences in aggressive behaviour, suggesting that age-related social dynamics may differently impact boys and girls with ASD. Moreover, Carter (2020) found that prolonged exposure to bullying during developmental stages has lasting psychological consequences, including elevated aggression. Aggression in ASD is multi-factorial. Farmer et al. (2016) identified sensory processing problems, communication deficits, and age-related stress as key risk factors.

addressing sensory and behavioural needs through targeted interventions to mitigate aggression and bullying in educational settings. While gender was found to influence aggression, particularly with males showing higher tendencies, it did not significantly impact experiences of

Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder

bullying. This suggests that anti-bullying behavioural and environmental factors strategies should focus more on rather than demographic attributes.

Recommendations

The following recommendations are made based on the findings:

1. There is need for schools to adapt classroom settings to reduce sensory overload for students with Autism Spectrum Disorder (ASD). This includes minimizing loud noises, bright lights, and unpredictable stimuli that may trigger sensory sensitivity and lead to aggression.
2. Psychologists should be deployed to schools to implement structured behavioural and cognitive interventions focused on helping students with ASD
3. Clinical psychologists should collaborate with schools to create targeted interventions that consider gender differences in emotional expression and behavioural responses. For example, male students may benefit from programs emphasizing anger management and non-violent communication.

Disclosure statement

The authors declared no potential conflicts of interest related to this study.

Funding

The authors confirmed that no external funding was received for the research or publication of this article.

REFERENCES

- Anderson, J. L., Myles, B. S., & Cherry, M. L. (2017). Educating students with autism spectrum disorder: Evidence-based practices for the classroom. *Intervention in School and Clinic*, 52(3), 131–139
- Baker, A. E. Z. (2018). Predicting aggression and self-injury in children with autism spectrum disorder. *Research in Autism Spectrum Disorders*, 54, 94–104. <https://doi.org/10.1016/j.rasd.2018.07.001>
- Boyd, B. A. (2019). The role of repetitive behaviour in peer interactions of children with ASD. *Research in Autism Spectrum Disorders*, 62, 29–38.

- Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder
- Brown, R. (2022). Mindfulness-based interventions for emotional regulation in autism. *Journal of Autism Interventions*, 8(3), 221–238.
- Carter, A. (2020). Long-term consequences of bullying in autism spectrum disorder. *Journal of Developmental Psychology*, 32(5), 490–510.
- Farmer, C. A., & Aman, M. G. (2016). Aggression in youth with autism spectrum disorders: Prevalence and risk factors. *Research in Developmental Disabilities*, 55, 10–20.
- Kerns, C. M. (2019). Mechanisms of aggression in children with ASD. *Research in Autism Spectrum Disorders*, 64, 34–45.
- Lecavalier, L. (2019). Comprehensive interventions for ASD: A review. *Pediatrics*, 144(3), e20183326.
- Mazurek, M. O. (2017). Anxiety, sensory over-responsivity, and gastrointestinal problems in children with autism spectrum disorder. *Journal of Abnormal Child Psychology*, 45(8), 1655–1665.
- Motlaghi, S., & Jokar, L. (2015). The relationship between sensory sensitivity and bullying victimization in children with autism. *Exceptional Children Quarterly*, 15(4), 35–44.
- Ojo, J. A. (2019). Gender differences in aggressive behaviour among students with autism in Lagos State. *Journal of Research in Special Education Needs*, 5(2), 44–52.
- South, M. (2021). Navigating the social world: The role of repetitive behaviour in autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 51(1), 56–67.
- Turner-Brown, L. M. (2019). Cognitive flexibility and its relationship to repetitive behaviour in autism. *Journal of Autism and Developmental Disorders*, 49(2), 333–345.
- van Roekel, E. (2020). Aggressive behaviour and peer relations in adolescents with ASD. *Journal of Autism and Developmental Disorders*, 50(6), 2019–2030.
- Zablotsky, B., et al. (2022). Bullying among children with autism spectrum disorder: Prevalence and correlates. *Journal of Autism and*

- Dada, O. A., & Oyeleke, J. T. (2025). Psycho-demographic predictors of aggression and bullying among students with autism spectrum disorder independent play activities. *International Journal of Academic Research in Business & Social Sciences*, 1, 23-35. <https://doi.org/10.6007/ijarbss/v13-i4/16725>
- Ajemba, M., & Chujor, C. J. (2023). Conversational skills, speech production and academic achievement among children with autism spectrum disorder in special needs schools in Rivers State, Nigeria. *International Journal of Education, Learning and Development*, <https://doi.org/10.37745/ijeld.2013/vol11n24150>
- Dada, O.A. & Amodu, T.A. (2017). Needs assessment of rehabilitation centres for vocational skill acquisition of persons with autism spectrum disorders in Nigeria. *International Journal of Issues on Disabilities*, 1(1), 29-34.
- Dada, O.A. (2018). Rehabilitation services for persons with autism spectrum disorder in Nigeria. *Prestige Journal of Counselling Psychology*, 1(1), 185-195.
- Dushka, A. L. (2022). Bulling children with autism spectrum disorder. *Psihologîa ta Sociâl'na Robota*, 2(54), 54–63. [https://doi.org/10.18524/2707-0409.2021.2\(54\).241386](https://doi.org/10.18524/2707-0409.2021.2(54).241386)
- Hassan, M. B., & Khairuddin, K. F. (2023). Social skills of children with autism during
- Matthias, C., LaVelle, J. M., Johnson, D. R., Wu, Y. C., & Thurlow, M. (2021). Exploring predictors of bullying and victimization of students with autism spectrum disorder (ASD): Findings from NLTS 2012. *Journal of Autism and Developmental Disorders*, 51(12), 4632–4643. <https://doi.org/10.1007/S10803-021-04907-Y>
- Talantseva, O. I., Romanova, R. S., Shurdova, E. M., Dolgorukova, T. A., Sologub, O. P., Titova, D., Kleevea, E. L., & Grigorenko, V. S. (2023). The global prevalence of autism spectrum disorder: A three-level meta-analysis. *Frontiers in Psychiatry*, 14(1071181). <https://doi.org/10.3389/fpsy.2023.1071181>