

CLASSROOM SIZE AS A PREDICTOR OF BULLYING BEHAVIOUR AMONG SECONDARY SCHOOL ADOLESCENTS IN NIGERIA.

ABSTRACT

Aim: This study was carried out to investigate the patterns of bullying behaviour among Nigerian secondary school adolescents and to ascertain the link between classroom size and bullying in selected Senior Secondary Schools in Ogun State, Southwestern Nigeria.

Study design: Cross-sectional survey design.

Place of Study: Redeemer's University Osun State, South Western Nigeria.

Methodology: Multistage sampling technique was adopted in this study. Random sampling technique was used to select Obafemi / Owode Local Government Area (LGA) from Ogun central senatorial district, four Senior Secondary Schools (SSS) from the LGA and 397 students. Participants responded to School Congestion Questionnaire (SCQ) and Adolescent Peer Relation Instrument: Bully/Target (APRI-BT). Descriptive and inferential statistics were used in data analysis

Results: Observed prevalence rates included verbal bullying (42.5%), social bullying (42.3%), physical bullying (37.9%) and overall bullying behaviour (44.8%). Class Size (CS) independently and significantly predicted the severities of verbal bullying ($R^2 = .029, p = .001$); social bullying ($R^2 = .055, p = .000$); physical bullying ($R^2 = .042, p = .000$) and overall bullying behaviour ($R^2 = .042, p = .000$) among the sample.

Conclusion: There is a high prevalence of bullying behaviour among Nigerian secondary school adolescents. Classroom size is a significant predictor of the individual factors of bullying behaviour (verbal bullying, social bullying, and physical bullying) as well as the composite of bullying behaviour among Senior Secondary School students in Nigeria.

Key words: Classroom size, bullying behaviour, school adolescents.

1. INTRODUCTION

Bullying at school is a phenomenon that has over the years gained global concern. The prevalence rates however vary across countries [1, 2]. Bullying has been defined as aggressive behaviour, repeated over time, which results in harm to another person, who is usually powerless to defend themselves [3]. Bullying comprises verbal attacks such as name calling, threats), physical behaviours (e.g. hitting, kicking, damaging victim's property), and relational/social aggression (e.g. social exclusion, rumor spreading) [4, 5, 6] up to the most recent forms of attacks through Internet and new technologies also referred to as cyber bullying.

According to Olweus[7] a person is bullied when he or she is exposed, repeatedly and over time, to negative actions carried out by one or more other persons. Stassen [8]; Wolke and Lereya, [9] operationalized bullying in three elements: repetition, harm, and unequal power. Some authors examined the forms of bullying. Stassen [8] differentiates between physical, behavioural, verbal, and relational bullying. Physical bullying involves hitting, kicking, and other types of physical actions. Behavioural bullying implies that something mean is done on purpose, but without direct physical harm (e.g., stealing from someone, holding one's nose when someone approaches). Verbal bullying concerns, for instance, repeated derogatory remarks or name calling. Social bullying involves deliberately ignoring someone or moving away when the person approaches. Apart from the traditional form, a more recent form is cyber bullying, which includes, spreading rumors about a person via the internet or cell phones [10, 11, 12,8]. Craig, Harel-Fisch, Fogel-Grinvald, Dostaler, Hetland, and Simons-Morton [13] and Stassen [8] distinguished between direct and indirect bullying. Direct bullying is explained as expressions of

48 physical aggression such as hitting and kicking, but also verbal aggression such as teasing, insults, and
49 threats. Indirect bullying includes manipulations of social relationships that hurt or exclude other
50 individuals, for instance, gossiping, spreading rumors, ignoring others intentionally, and influencing others
51 to tease or to physically hurt someone. It should be emphasized that there is no dyadic relationship
52 between bullies, on the one hand, and victims, on the other [7]. Students' become involved in bullying
53 situations as bullies, victims, bully victims, or bystanders [14]. Some observers encourage and reinforce
54 bullies, whereas others defend the victims [15].
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56 Whitney & Smith [16];Owens, Shute, and Slee [17]identified insults, name-calling and nicknames, hitting,
57 direct aggression, theft, threats, and social exclusion or isolation as the most common and frequent forms
58 of bullying. To Crick & Grotpeter [18] hitting, direct and indirect aggression in the form of verbal abuse,
59 gestures threats, and destruction of property are considered as major forms of bullying. Moreover, Berger
60 [19] added verbal abuse, sexual harassment, and dating violence are the form of bullying, which include
61 bullying behaviour in the form of relational and physical bullying [20, 21].
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63 The effects of students' involvement peer bullying are wide-ranging, with negative consequences on their
64 physical, psychological and social well-being [22, 23]. There are also evidences for the long-term effect of
65 these negative effects of bullying [24, 25]. In the same line of finding, Stassen [8], affirm that bullying has
66 negative effects on the well-being of both victims and perpetrators, in both the short and the long term.
67 Exposure to bullying behaviour whether as a bully, victim, or by stander has been linked to adverse
68 mental health outcomes both in cross-sectional [26] and in longitudinal studies [27, 9]. In addition to
69 bullying often having adverse implications for the psychological, social and physical development of the
70 students involved, those merely witnessing the incidents can be negatively affected by it [28]. Bullying is
71 harmful not only to those who are directly involved (victims or perpetrators) but also to other members in
72 the peer group, and can worsen subjective health for the class as a whole [29, 30].
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74 Classrooms vary considerably in rates of bullying and victimization [31, 32]. Some studies have
75 investigated demographic and structural characteristics of classrooms and schools, such as grade level
76 and number of students, classroom size and so on and how these may contribute to school bullying
77 behaviour. Implications of the characteristics of the peer contexts shared by students, such as status
78 hierarchy, norms, bystander behaviours and climate quality, role of teachers has also been studied
79 especially in developed nations.
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81 **1.1. Theoretical Perspectives of Bullying**

82 Some researchers find bullying as Group Process in which all group members are assigned different
83 roles [33]. They affirm that school students being members of social group occupy different roles to foster
84 feelings of belongingness and to establish themselves in social hierarchy and to reinforce the occurring of
85 bullying. Some of the identified roles are: Ringleader Bully, Assistant, Rein forcer, Defender, Victim and
86 outsider-bystander. Ringleaders initiate the aggression against the target, assistants are followers who
87 help the bully and engage in aggression against friends, rein forcers are those group members who
88 provide attention to then bully and provide feedback about the bully's destructive behaviour [33].

89 Murkowski et al., [34] viewed bullying from a group dynamics perspective i.e. integrity, homogeneity, and
90 other evolutionary changes are viewed in group as goals in group dynamic perspective. The attainment of
91 these goals is given utmost value by all members of a group. Children who are seen as hindrance or
92 unable to achieve these goals are victimized and excluded from the specific group by other members of
93 that particular group. Such children as a result become anxious and socially isolated because of their
94 inability to accept ecological changes and adaptability to meet the desired requirements to stay along the
95 group. Thus such children are victimized and rejected because these threaten consciously or
96 unconsciously, group integrity, and other ecological changes through different ways.
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98 Some studies have failed to find an association between school size and bullying problems [35, 5, 36,
99 16,37]. Klein and Cornell [38] showed that teacher- and peer-perceived bullying was higher in larger high
100 schools, whereas school size was not associated with students' self-reports of victimization. The link
101 between classroom size and students bullying behaviour has returned differing reports. While some
102 researchers found no association between class size and bullying behaviour [5, 16, 39], other studies
103 reported that victimization was more prevalent in larger classrooms [35].Few researches have been done

104 in low- and middle income countries on bullying behaviour[40]. This present study aims to determine the
 105 patterns of bullying behaviour among Nigerian secondary school adolescents and ascertain the link
 106 between classroom size and bullying in selected senior secondary schools in Ogun state, Southwestern
 107 Nigeria.
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109 **1.2. Research Questions**

- 110 What is the pattern of bullying behaviour among Nigerian secondary school adolescents?
- 111 To what extent does classroom size predict the severity of verbal bullying among the participants?
- 112 To what degree does classroom size predict the severity of social bullying among the participants?
- 113 To what extent does classroom size predict the severity of physical bullying among the participants?
- 114 To what degree does classroom size predict the severity of bullying behaviour among the Nigerian
 115 secondary school adolescents?

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 118 **2. MATERIAL AND METHODS**

119 **2.1 Participants**

120 A cross sectional survey design was employed in the study. The population comprised of male and
 121 female Senior Secondary School (SSS) students in Ogun State, Southwestern Nigeria. Multistage
 122 sampling technique was adopted in this study. Random sampling technique was used to select Obafemi /
 123 Owode Local Government Area (LGA) from Ogun central senatorial district and four Senior Secondary
 124 Schools (SSS) from the LGA. Finally 100 respondents were randomly selected from each of the four
 125 schools. Of the returned instruments 397 were found well completed and used for the study.
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127 **2.2 Measures**

128 Two instruments were used for data collection. This includes one structured questionnaire titled School
 129 Congestion Questionnaire (SCQ).
 130 Adolescent Peer Relation Instrument: Bully/Target (APRI-BT) was developed by Parada [41]. It's a 36-
 131 item measure with 6 subscales assessing the frequency of physical, verbal, and social bullying as both
 132 the perpetrator and victim. For this present study only the items containing victims scale was used. Its
 133 original psychometric properties reveal the following Chronbach's alpha: Total bully score = 0.93, Total
 134 victim score = 0.95, Subscale scores = 0.83 to 0.92. In a pilot study the obtained Chronbach's alpha using
 135 a Nigerian sample is 0.75 which makes the psychometric properties acceptable for a Nigerian sample.
 136 The instrument is written in English language hence there was no need for translation to a Nigerian
 137 language since the respondents could read and understand the English language.
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139 **2.3 Data Analysis**

140 Collected data was analyzed using the Statistical Package of Social Sciences (SPSS pack 23). To
 141 measure, organize, summarize and describe the descriptive statistic (patterns of bullying behaviour and
 142 demographic characteristic of the participants), frequency count and percentages were calculated. To test
 143 the hypotheses, linear regression analysis was employed to determine the degree to which the
 144 independent variable predicted the dependent variables among the participants
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146 **2.4 Demographic Characteristics of Participants.**

147 Table 1 presents the summary of the participant's socio-demographic data. Distribution by school shows
 148 that CHSO were 100 (25.2%), CHSA 98 (24.7%), OHS 100 (25.2%) and OGS 99 (24.9%). On the level of
 149 study SSS1 were 77 participants (19.4%), SSS2 were 117 (29.5%) while SSS3 were 198 (49.9%)
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151 **Table 1: Demographic characteristics of the sample**

| N = 397 | | | |
|-----------|-----------------------|-----------|------------|
| Variables | Levels | Frequency | Percentage |
| School | Community High School | 100 | 25.2% |

| Ofada(CHSO) | | | |
|----------------|------------------------------|-----|-------|
| | Community High School Adesan | 98 | 24.7% |
| | (CHSA) | | |
| | Owode High School (OHS) | 100 | 25.2% |
| | Owode Grammar School (OGS) | 99 | 24.9% |
| | Total | 397 | 100% |
| Level of study | SSS1 | 77 | 19.4% |
| | SSS2 | 117 | 29.5% |
| | SSS3 | 198 | 49.9% |
| | Total | 397 | 100% |

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3 RESULTS

The patterns of bullying behaviour as summarized in table 2 show that there is a high prevalence of the factors used to measure bullying behaviour among the participants. An overall prevalence of bullying behaviour 44.8% was reported. Among the factors, the highest was verbal bullying (42.5%), next was social bullying (42.3%) and the lowest was physical bullying with 37.9% prevalence.

Table 2: Patterns of bullying behaviour among the participants

| N = 397 | |
|--------------------------|----------------|
| Factors | Prevalence (%) |
| Verbal bullying | 42.5 |
| Social bullying | 42.3 |
| Physical bullying | 37.9 |
| Bullying behaviour total | 44.8 |

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A linear regression analysis was carried out to determine the degree to which classroom size independently and significantly predicted severity of verbal bullying among the participants. Result indicated that CS independently and significantly predicted the severity of verbal bullying among the sample, ($R^2 = .029$, $p = .001$). The analysis summarized in table 3 suggests that 2.9% variance severity of verbal bullying is explained by class size of the students.

Table 3: Linear Regression Analysis of degree of verbal bullying by Classroom Size (CS) among Nigerian Senior Secondary School adolescents.

| N = 397 | | | | | | | |
|---------|---------|---|-----|-------|---|---|--|
| B | β | T | sig | R^2 | F | p | |
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|----------------|-------|-------|-------|------|------|-------|------|
| (Constant) | 21.00 | | 14.75 | .000 | | | |
| Classroom size | -0.67 | -0.17 | -3.36 | .001 | .029 | 11.29 | .001 |

170
 171 A linear regression analysis was carried out to determine the degree to which Classroom Size (CS)
 172 independently and significantly predicted severity of social bullying among the participants. Result
 173 indicated that CS independently and significantly predicted the severity of social bullying among the
 174 sample, ($R^2 = .055$, $p = .000$). The analysis summarized in Table 4 suggests that 5.5% variance severity
 175 of social bullying is explained by classroom size of the students.
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177 **Table 4: Linear Regression Analysis of degree of socialbullying by Classroom Size (CS) among**
 178 **the participants.**
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| N = 397 | | | | | | | |
|------------|-------|---------|-------|------|-------|-------|------|
| | B | β | T | sig | R^2 | F | p |
| (Constant) | 21.00 | | 16.31 | .000 | | | |
| Class size | -0.85 | -0.23 | -4.72 | .000 | .055 | 22.27 | .000 |

181
 182 A linear regression analysis was carried out to determine the degree to which classroom size
 183 independently and significantly predicted severity of physical bullying among the participants. Result
 184 indicated that CS independently and significantly predicted the severity of physical bullying among the
 185 sample, ($R^2 = .042$, $p = .000$). The analysis summarized in Table 5 suggests that 4.2% variance severity
 186 of physical bullying is explained by classroom size of the students.
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188 **Table 5: Linear Regression Analysis of degree of physical bullying by Classroom Size (CS) among**
 189 **Nigerian Senior Secondary School adolescents.**
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| N = 397 | | | | | | | |
|----------------|-------|---------|-------|------|-------|-------|------|
| | B | β | T | sig | R^2 | F | p |
| (Constant) | 21.58 | | 14.41 | .000 | | | |
| Classroom size | -0.86 | -0.21 | -4.11 | .000 | .042 | 16.91 | .000 |

192 A linear regression analysis was carried out to define the extent to which classroom size independently
 193 and significantly predicted severity of bullying behaviour among the participants. Result indicated that CS
 194 independently and significantly predicted the severity of bullying behaviour among the sample, ($R^2 = .042$,
 195 $p = .000$). The analysis summarized in Table 6 suggests that 4.2% variance severity of bullying behaviour
 196 is explained by classroom size of the students.
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198 **Table 6: Linear Regression Analysis of degree of Bullying Behaviour by Classroom Size (CS)**
 199 **among Nigerian Senior Secondary School adolescents.**
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| N = 397 | | | | | | | |
|----------------|-------|---------|-------|------|----------------|-------|------|
| | B | β | T | sig | R ² | F | p |
| (Constant) | 60.60 | | 16.68 | .000 | | | |
| Classroom size | -2.09 | -.21 | -4.10 | .000 | .042 | 16.83 | .000 |

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4. DISCUSSIONS

203 This study investigated classroom size (CS) as a predictor of bullying behaviour among Senior Secondary
 204 School adolescents in Ogun state Nigeria. The first objective was to explore the patterns of bullying
 205 behaviour among the participants. Result revealed that there is a high prevalence of bullying behaviour
 206 among the Nigerian adolescents. This result supports research findings across the globe. For instance
 207 Craig et al., [13] who in a cross-national survey of among students aged 11 to 15 years, returned a 13%
 208 and 11% respectively of victims and bullies. Prevalence in a survey of 40 European countries and North
 209 America countries ranged from 6.7% for Sweden to 40.5% in Lithuania [13]. Juvonen and Graham [42]
 210 reported that approximately 20–25% of youth were directly involved in bullying as perpetrators, victims, or
 211 both.

212 In a meta-analysis on bullying and cyber bullying Modecki et al., [43] reported an estimated mean
 213 prevalence of 35% for traditional bullying and 15% for cyber bullying involvement. Sittichai and Smith
 214 [44] reviewed studies from ten Asian countries returned a prevalence of about 10% concluding that
 215 bullying-like behaviours are fairly frequent in the ten countries, with comparable prevalence rates to those
 216 found in western countries. Oliveros, Figueroa, & Mayorga, [45] reported a 40 – 50% prevalence of
 217 bullying behaviour among teens in Peru and Colombia. Studies from Nicaragua showed the involvement
 218 of 35% of secondary school students [46]. However unlike the prevalence of bullying found in eastern and
 219 western countries, the prevalence of bullying behaviour found among the Nigerian samples is quite
 220 higher. This difference could be as a result of the socio-cultural and economic situations of the low
 221 income African nations. For instance Greeff and Grobler [47] returned that a percentage of 56.4% of
 222 South African students reporting to be bullied. Approximately 25–35%, of direct and indirect forms of
 223 bullying was reported in Algeria [48].

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225 This present study also found that class size significantly predicted the individual factors (verbal bullying,
 226 social bullying, and physical bullying) as well as the composite of bullying behaviour among the Nigerian
 227 sample. There is opposing findings among researcher on the influence of classroom size on bullying
 228 behaviour in schools. Some found no association between classroom size and bullying behaviour [5, 39,
 229 16], while some other studies reported that victimization was more prevalent in larger classrooms [35].

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231 Saarento et al. [49] and Vervoort et al. [50] disclosed that peer-reported victimization was more common
 232 in smaller classrooms and that classroom size was not related to self-reported victimization. Also
 233 classroom size was found to moderate the effects of intra and interpersonal risk factors on peer- and self-
 234 reported victimization [49]. The authors explained that for socially anxious students had the risk of being
 235 bullied was exacerbated in smaller classrooms. Additionally Ma [51] found the risk of self-reported
 236 bullying to be increased in smaller middle schools.

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5. CONCLUSIONS

238 There is a high prevalence of bullying behaviour among Nigerian secondary school adolescents.
 239 Classroom size is a significant predictor of the individual factors of bullying behaviour (verbal bullying,
 240 social bullying, and physical bullying) as well as the composite of bullying behaviour among Senior
 241 Secondary School students in Nigeria.
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6. RECOMMENDATIONS

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245 The role of classroom size on bullying behaviour among in school adolescents is reported in this study. It
246 is therefore of necessity that proper attention be given to student-teacher ratio which eventually
247 determines the class size. Class size varies from nation to nation [52]. Among member countries of
248 Organization for Economic Cooperation and Development (OECD) (of which Nigeria is not yet a
249 member), average reported class size as at 2013 was 24.1 [52].
250 More countries should be encouraged to sign on OECD membership and individually determine
251 acceptable and manageable class size for their social cultural settings. Smaller classes allow teachers to
252 devote more time to instruction and less to classroom management could increase in students'
253 achievement, has fewer discipline problems, as well as improve teachers' morale and retention.
254 Consequently, for state owned schools that are already congested, projects of reducing classroom sizes
255 should be embarked on through the expansion of existing school infrastructures as well as building
256 newer schools where "spill over students" and newer intake would be enrolled.
257 Also, policies restricting both private and state owned school authorities from enrolling more student than
258 available teaching and non-teaching staff can handle effectively should be implemented and vigorously
259 executed. Education ministries both at the Federal State and Local Government levels should set up
260 designated supervisory bodies that ensure adherence to acceptable teacher- students- ratio in schools.
261 This will go a long way in enabling the school authority give proper attention to the students, identify the
262 victims and perpetrators of bullying behaviour and effectively deal with the problem.
263 Also, there is need for the services of school psychologist, social workers and counselors in all school.
264 These professionals will help identify and assess both victims and perpetrators of bullying in other to give
265 the necessary interventions. Finally, more research studies on the role of school climate on behaviour
266 patterns of secondary school students especially in Nigeria should be carried out.

267 **CONSENT:**

268 **AS PER INTERNATIONAL STANDARD WRITTEN PARTICIPANT CONSENT HAS BEEN**
269 **COLLECTED AND PRESERVED BY THE AUTHORS**

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271
272 **ETHICAL: NA**

273 **COMPETING INTERESTS**

274 Authors have declared that no competing interests exist.
275

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