INFLUENCE OF EMOTION REGULATION AND IMPULSE CONTROL ON AGGRESSIVE BEHAVIOUR OF SELECTED SECONDARY SCHOOL STUDENTS IN LAGOS METROPOLIS

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Abstract

This study investigated the influence of emotion regulation and impulse control ability on the aggressive behaviour of selected secondary school students in Lagos Metropolis. The study was conducted among 318 secondary school students, comprising 158 males and 160 females with ages between 10 and 18 years old. The participants were selected through a convenience sampling technique. Data were collected using a set of questionnaires that included three standardized psychological instruments: the Barratt Impulsiveness Scale (BIS-15), the Emotion Regulation Questionnaire for Children and Teenagers (ERQ-CA), and the Buss-Perry Aggression Questionnaire (BPAQ). Four hypotheses were tested using Pearson Correlation and a PERMANOVA analyses. The findings of the study indicate that impulse control ability significantly correlates with aggressive behaviour. Further, finding shows that teenagers who demonstrated cognitive reappraisal regulation had low aggression scores. The result also shows that emotion regulation is associated with aggression. The study discusses how teenagers with aggressive behaviour can be supported to build emotion regulation and impulse control skills to live harmoniously with peers and others.

Keywords: Impulse control ability, emotion regulation, aggressive behaviour

Introduction

Aggression is a social problem with a high prevalence among young people globally (Asekun, forthcoming). It hasprofound repercussions on social skills and interpersonal relationships (Jenkins et al., 2017), potentially leading to negative perceptions among peers and teachers, peer exclusion, low academic performance, self-harm, and anxiety. Aggression has long been an issue of concern in human civilization; its manifestations are quite complex and varied, with diverse causes and consequences (Alami et al., 2015). The various forms in which aggression manifests include: verbal, physical, emotional, instrumental, and relational. While several studies have attempted to establish the link between emotion regulation and aggression (e.g., Roll et al., 2012;Tager et al., 2010), there is a scarcity of studies that examine its relationship, particularly on verbal and physical aggression distinctively. It is worth noting that emotion regulation abilities develop over time, as evidenced by previous studies indicating that children generally

struggle more than adults in regulating their emotions (Archer, 2004). Additionally, research suggests that children, starting from kindergarten age, who employ ineffective emotion regulation strategies like expressive suppression, tend to exhibit higher levels of aggression compared to their peers (Gross & Cassidy, 2019). Across all cultures, men are physically more aggressive than women. Although some forms of aggressive behaviour are more common in females (e.g., infanticide, relational aggression), males are more likely to perpetrate a physical or armed assault against another person, particularly other males (Archer 2004). Existing evidence indicates that males are consistently more likely to engage in direct physical aggression than females (Archer, 2004, 2009; Fagan & Lindsey, 2014). Furthermore, the impacts of aggressive behaviour are complex, affecting academic performance, mental health, and social relationships (Aroyewunet al., 2022; Bibire et al., 2023). Students who exhibit aggressive tendencies often face academic challenges due to frequent disciplinary actions and a lack of focus (Okoro et al., 2011). Moreover, aggression is associated with increased risk of mental health disorders, such as depression and anxiety, which can persist into adulthood (Mestre et al., 2017). The ripple effects can extend beyond the individual, contributing to a hostile school climate that impedes the educational experiences of fellow students and strains school resources. Understanding the predictors of aggressive behaviour is essential for developing effective interventions.

Present Study

Past studies have shown that deficits in impulse control ability and emotional regulation are strongly linked to aggressive behaviour in teenagers (Yu et al., 2021; Paulus et al., 2021). However, there is limited research on how these factors predict aggressive behaviour among teenagers. This study aims to fill this gap by examining these predictors in the Nigerian context. The study has these specific objectives as below: (1) to investigate the prevalence of aggressive behaviour among secondary school students; (2) to investigate the correlation among impulse control ability and aggressive behaviour;(3) to examine the extent to which cognitive reappraisal strategy regulates verbal and physical aggression (4) to investigate the nature of the relationship emotion regulation, and aggressive behaviour. The following hypotheses were formulated and tested:

1. There will be a significant relationship between impulse control ability and aggression.
2. Teenagers who demonstrate cognitive reappraisal regulation would be low on verbal and physical aggression.
3. Emotion regulation will be a significant correlate of aggressive behaviour.

Literature Review

The term "aggression" in psychology describes a variety of actions that have the potential to cause bodily or psychological harm to an individual, other people, or environment-based objects (Cherry, 2026). Although everyone experiences occasional episodes of aggression, strong or pervasive aggression may indicate a mental health problem, substance abuse problem, or other medical concern (Blair, 2016). Until recently,

psychological aggression was often considered a form of secondary violence, less severe than physical aggression (Fritz & O'Leary, 2004), and it therefore received much less attention. However, some findings indicate the need to more deeply define and analyze psychological violence as well as its consequences (Winstok&SowanBasheer, 2015). Accordingly, some studies suggest that psychological aggression has an impact on the victim's mental health that is at least comparable to that of physical aggression (Almendros et al., 2009). This has led scholars to make clarifications on different categories of aggression, for example, the factorial analyses carried out by Buss and Perry (1992) revealed four factors, which were called Physical Aggression, Verbal Aggression, Hostility, and Anger. This classification has provided insight into the nature of aggression among teenagers as well as the adult population. Studies have shown a moderate connection between impulsivity and aggression, which may be attributed to shared genetic and environmental influences (Seroczynski et al, 1999), as well as a common temperamental predisposition for irritability (Coccaro, 1992). Additionally, research suggests that individuals with poor impulse control are more prone to participating in risky behaviours, as they struggle to exert the necessary self-control (Moulin et al., 2018).

Krakowski and Czobor (2018) indicate that the impulsivity trait is thought to be a key factor in the onset of aggressive behaviours. Further, several studies conducted in Western countries have revealed a positive correlation between impulsivity and aggression, both concurrently and longitudinally (Martin et al., 2019; Soloff et al., 2014). However, these correlations have primarily been investigated among forensic or clinical populations and often treated impulsivity as a singular construct rather than considering its multifaceted nature. Two commonly studied strategies for emotion regulation are cognitive reappraisal and expressive suppression. Cognitive reappraisal involves mentally reframing a situation to alter its emotional impact, whereas expressive suppression entails inhibiting the outward display of one's internal emotional state (Gross, 2015). These strategies have differing effects on aggressive behaviour, with cognitive reappraisal considered an adaptive approach that reduces the likelihood of aggression, while expressive suppression can heighten such behaviour and is thus regarded as a risk factor for aggression in both adults and youths (Chervonsky& Hunt, 2019). Moreover, studies suggest that exposure to media violence can lead to increased aggressive behaviour in children and young adults for example, Yusuf (2016) observed significant differences in aggression levels across age groups among inmates, with younger age groups showing higher aggression levels although, Ignatius et al. (2022) found no statistically significant differences in aggressive behaviour across age groups among teenagers.

Theoretical background

Social learning theory, as submitted by Albert Bandura in 1997, proposes that individuals acquire aggressive behaviours, attitudes, and skills by observing others and the outcomes of their actions. Learning happens through modeling, where individuals, including teenagers, imitate the aggressive behaviours

of their role models, and reinforcement, where behaviours receive either rewards or punishments. Bandura maintained that aggressive behaviour in people is shaped through direct experience and observational learning. For instance, when children witness events in which someone gets rewarded for acting aggressively, they can become more inclined to display similar behaviour in similar situations. Bandura (1997) outlines three key aspects essential for understanding aggressive behaviour: the origins, instigators, and regulators of aggression. Aggressive actions are often reinforced through incentives, social approval, alleviation of aversive treatment, and the infliction of pain on victims. While trial and error can lead to the learning of aggressive behaviour, observation of others plays a significant role, with individuals learning vicariously through modeling processes. This observational learning involves attention to modeled events, encoding observations into memory, transforming cognitive processes into imitative responses, and performing the behaviour when incentives are present.

Method

A cross-sectional research design was employed, allowing the researcher to collect data simultaneously from different secondary school students in selected schools. This design was selected because of its appropriateness in the examination of the relationship between independent variables (impulsive control, emotional regulation) and the dependent variable (aggressive behaviour), without manipulating any of these variables.

Participants and Sampling Technique

The estimated total population of the four schools selected was 1,400 students. Using the Taro Yamane sample size calculator, a sample of 320 students was determined. The schools were located in Lagos West and were randomly selected for the study. Similarly, the sample of the study in each of the schools was randomly selected, with an average of 80 students from each school. The sample consisted of 158 male and 160 female respondents between the ages of 10 and 18 years. These respondents were selected through a convenience sampling technique to take part in the study.

Research Instruments

Data collection involved a paper-and-pencil questionnaire which included questions regarding demographic information of the respondents and three standardized psychological measuring instruments, which include:

Aggression Questionnaire (BPAQ):This measure was developed by Buss and Perry (1992). The instrument is a widely recognized self-report tool that consists of 29 items rated on a 5-point scale and was adapted from the 1957 Buss-Durkee Hostility Inventory (BDHI). This widely validated tool has been translated into multiple languages, with its psychometric properties consistently affirmed in various studies (e.g., Archer & Haigh, 1997; Harris, 1995). The BPAQ has also been extensively researched and proven reliable across different languages and cultures, maintaining the same four-factor structure in places like Japan, Russia, etc. (Ireland & Archer, 2004; O'Connor, et al.., 2001; Harris, 1995).

Studies consistently support the reliability of the tool, with Buss and Perry reporting internal consistency scores ranging from 0.72 to 0.89 across sub-scales and the overall scale (Archer & Haigh, 1997).

The Barratt Impulsiveness Scale (BIS-15). This is a shortened version developed by Spinella (2007). This instrument measures impulsivity in three areas: non-planning impulsivity, motor impulsivity, and attentional impulsivity. The three-factor structure of the BIS-15 has been validated across various languages, including Spanish, German, etc., showcasing its wide applicability (Bhat et al., 2018; Juneja et al., 2019). The BIS-11 version typically demonstrates good reliability, with Cornbrash's alpha scores exceeding 0.7 for most factors, indicating acceptable internal consistency. Scoring of the BIS-15 involves summing responses to the 15 items, each rated on a Likert scale (from 1 to 4), with higher scores reflecting higher impulsivity levels.

The Emotion Regulation Questionnaire for Children and Teenagers (ERQ-CA) was developed by Gullone and Taffe (2012). The scale was used to elicit respondents' responses regarding their ability to regulate their emotions. This psychological instrument measures two key emotion regulation strategies: cognitive reappraisal (CR) and expressive suppression (ES), through 10 items. Each item is rated on a 5-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree), a reduction from the original 7-point scale by Gross and John (2003). This instrument has been validated in numerous languages, including Chinese (Liu, Chen &Tu, 2015), and many more. These adaptations have consistently demonstrated good internal reliability, with CR scores ranging between 0.70 and 0.82, and ES scores of 0.71.

Procedures

The researcher obtained permission from the school authorities as well as the ethics approval from the University of Lagos Ethics Committee. The regulations and ethics on research were strictly followed. Informed consent was obtained from all participants, ensuring that they fully understood the purpose of the research, their role in the study, and the potential benefits and risks involved. The consent form included clear explanations of the voluntary nature of participation, the right to withdraw at any stage without any consequence, and the assurance that no adverse outcomes would result from non-participation or withdrawal. Confidentiality was guaranteed throughout the research process. Participants' identities were anonymized, and no personally identifiable information was linked to any data collected. All data were stored securely in password-protected digital files. Out of 320 questionnaires administered, 318 were completed the questionnaires and retrieved.

Data Analysis

Data were analyzed using SPSS (version 26) with descriptive statistics and inferential tests. Correlation and Permutation Multivariate Analysis of Variance (PERMANOVA) were adopted for the study. PERMANOVA was adopted because the sample failed the assumption of MANOVA on the normality test and the test of equality of covariance matrices. PERMANOVA,

which is a non-parametric test that does not require satisfying the assumptions of normality and equality of variance to test the above stated hypothesis.

Demographics

Table 1: Data Presentation on Demographic Characteristics of Respondents

Socio Demographic variables	F (%)
Age Group	
10 - 12 years	116 (36.5)
13 - 15 years	163 (51.3)
16 - 18 years	39 (12.2)
Sex	
Male	158 (49.7)
Female	160 (50.3)
Religion	
Christianity	252 (79.2)
Islam	66 (20.8)
Ethnicity	
Igbo	77 (24.2)
Yoruba	209 (65.7)
Hausa	2 (.6)
Others	30 (9.4)

Source: fieldwork 2024

The above table shows the socio demographic characteristics of the participants that were engaged for the study. On the age of participants, those who were 10 - 12 years were 116 (36.5%), while those who were between the age of 13 and 15 years old were 163 (51.3%) while those who were between the age of 16 and 18 years old were 39 (12.2%). On the gender of participants, those who were male were 158 (49.7%) and the females were 160 (50.3%). On the religion of the participants, those who indicated that they were Christians were 252 (79.2%) and those who indicated that Islam was their religion were 66 (20.8%). On the Ethnicity of the participants, 77 (24.2%), were Igbo, 209 (65.7%) were Yoruba, 2 (.6%), were Yoruba, and others were 30 (9.4%).

Table 2: Showing prevalence of aggression among secondary schools students

Dimension of Aggression	N	%	Mean
Physical Aggression	318	26.88	7.43
Verbal Aggression	318	16.34	4.32
Anger	318	19.75	5.65
Hostility	318	22.25	8.06

Source: fieldwork 2024

Table 1 shows the prevalence of aggressive behaviour of students. Physical aggression has the highest prevalence (26.88%), followed by hostility having a prevalence of (22.25%), while,

anger has a prevalence of (19.75%), lastly, verbal aggression has the lowest prevalence of (16.34%) among the students.

Result

Hypothesis 1: There is a significant relationship between impulse control ability and aggression

Table 3: Correlation between impulse control and aggression

Variable 1	Variable 2	Correlation(rho)	P-Value
Impulse Control Ability	Aggression	0.2223	0.0000639

Sig @ P-value < 0.05

From the above presented correlation result, the result shows that impulse control and aggression have a correlation value of 0.2223 and the association between them is significant with value 0.0000639 which is less than 0.05. Thus, we can state that there is a significant though, weak positive correlation between impulse control ability and aggression.

Hypothesis 2

Teenagers who demonstrate cognitive reappraisal regulation would be low on verbal and physical aggression.

Table 4: The PERMANOVA of cognitive reappraisal and aggression

	DF	**Sum of Squares**	**R squared**	**F**	**P**
Model	1	6.1	0.00026	0.0824	<0.05
Residual	316	23413.1	0.99974		
Total	317	23419.2	1.00000		

Sig @ P-value < 0.05

R-squared (R2): 0.00067, meaning that only about 0.067% of the variance in aggression scores can be explained by reappraisal strategies.**F-statistic (F):** 0.0824, **p-value** <0.05 The PERMANOVA result suggests that teenagers who demonstrated cognitive reappraisal strategies score high on emotion control towards aggression.

Hypothesis 3: Emotion regulation will be a significant correlate of aggressive behaviour

Table 5: *Pearson Correlations,*

Variables		Mean	S,D		
1	Emotion Regulation	17.66	3.72	1	.060
2	Aggressive Behaviour	85.22	18.31	.060	1

Table 3 reveals that there exists a significant positive correlation between the emotion regulation of respondents (r = .06, P<.05) and aggressive behaviour. As such we accept the hypothesis which states that Emotion regulation will be a significant correlate of aggressive

behaviour. The result suggests that when a person has high emotion regulation, tendency to avoid aggressive behaviour increases and as emotion regulation level goes down tendency for aggressive behaviour increases.

Discussion

The current study examined the prevalence of aggressive behaviour among the participants in the study area. The result showed that physical aggression had the highest prevalence (26.88%), followed by hostility (22.25%), anger (19.75%), and verbal aggression (16.34%). These findings indicate that physical aggression is the most common type of aggressive behaviour among the participants. The findings of this study align with some aspects of the existing literature on aggression among teenagers and young adults. For instance, Verma et al. (2021) conducted a study on school-going teenagers in rural India and found that around half of the participants exhibited significant levels of overall aggression, with verbal aggression being the most prevalent subtype, followed by hostility, anger, and physical aggression. Similarly, Kumar et al. (2023) found high levels of hostility (51.8%) and verbal aggression (50.5%) among school-going teenagers in Delhi, with physical aggression present in 46.7% of participants.

However, there are notable differences in the prevalence rates of different forms of aggression between the current study and those conducted by Verma et al. (2021) and Kumar et al. (2023). The current study found that physical aggression was the most prevalent form of aggression among secondary school students, whereas Verma et al. (2021) and Kumar et al. (2023) reported that non-physical forms of aggression, such as hostility and verbal aggression, were more prevalent among school-going teenagers. These differences can be attributed to various factors, including age, cultural context, and methodological differences.

For the first hypothesis, this study found that there was a significant relationship between impulse control ability and aggressive behaviour. This is in line with the findings of Yu et al. (2021), who found that higher levels of impulsivity and motor impulsivity were significantly associated with increased aggressive behaviours. This finding is also consistent with the findings of Srinivasan et al. (2022) among male delinquent teenagers in observation homes in India, which found a significant correlation between impulsivity and aggressive behaviour of participants. This means that impulse control ability is a critical factor in aggressive behaviour across different contexts. Additionally, Bresin's (2019) meta-analysis, which confirmed that higher levels of impulsivity are linked to increased aggression, with certain facets showing stronger correlations, is quite instructive.

The second hypothesis reveals that teenagers who demonstrate a cognitive reappraisal regulation strategy would be low on verbal and physical aggression. Past studies have demonstrated how an intervention targeted at cognitive reappraisal among teenagers was successful in the control of aggression. This result suggests that an improvement in this cognitive social interaction would bring about lower aggressive tendencies, which is consistent with past studies. For example, Garaigordobil, (2008) and Byrne et al. (2004)

reported in their studies that cognitive reappraisal can reduce anger and hostilities. For the third hypothesis, our finding was also in the expected direction, i.e., emotion regulation significantly correlates with aggressive behaviour. This finding aligns with the finding of Purwadi et al. (2020), which found that emotion regulation was associated with decreased aggression among teenagers. Darmadi and Badayai's (2021) study in Malaysia also demonstrated a significant link between emotional dysregulation and aggressive behaviour among teenagers. Emotion regulation is a complex construct that may manifest differently across different age groups, cultural backgrounds, and contexts, which could influence its impact on aggressive behaviour.

Recommendations

In light of the findings from this study on the influence of emotion regulation ability on verbal and physical aggression among secondary school students in Lagos, several recommendations are advanced to promote emotional competence and reduce aggressive behaviours within the school environment. It is hereby recommended that emotional regulation and social–emotional learning (SEL) be systematically integrated into the secondary school curriculum. Evidence suggests that structured emotional education enhances students' self-awareness, empathy, and behaviouralcontrol, thereby reducing the likelihood of aggressive conduct. School-based interventions focusing on emotional awareness, impulse control, and interpersonal skills could therefore serve as preventive mechanisms against both verbal and physical aggression. Furthermore, teachers, counselors, and school administrators should undergo continuous professional development on emotion regulation strategies and conflict resolution techniques. As role models and frontline behavioural managers, educators play a crucial role in shaping students' emotional and social competence. Empowering teachers with practical tools for managing students' emotional outbursts and modeling adaptive regulation can significantly mitigate aggressive behaviours within the school setting.

Emotion regulation is influenced not only by school factors but also by the home environment. Therefore, parents and guardians should be engaged through workshops and sensitization programs that emphasize the importance of emotion control coaching and supportive parenting practices. Collaborative school–home partnerships can reinforce consistent emotional and behavioural expectations, fostering more stable emotional development among teenagers. Establishing peer mentorship and peer-support programs can further enhance emotional regulation among students. Teenagers often model behaviours observed in their peers; hence, involving emotionally competent students as mentors could promote prosocialbehaviours and reduce aggression through peer influence. Such initiatives also create opportunities for students to learn empathy, cooperation, and perspective-taking in a supportive context. Further, educational policymakers and school administrators in Lagos State should formulate and implement policies that promote emotional well-being and non-violent conflict resolution. These policies

should emphasize preventive and restorative approaches rather than punitive measures, aligning with global best practices in teenage behavioural management. Adequate funding and resource allocation for emotional education programs are equally essential for sustained impact.

Directions for Future Research

Further research is needed to examine the moderating effects of demographic variables such as gender, socio-economic status, and family structure on the relationship between emotion regulation and aggression. Longitudinal and experimental designs could provide deeper insights into the causal mechanisms underlying these associations. Additionally, cross-cultural comparative studies may enrich the understanding of how contextual factors shape emotional regulation and aggressive tendencies among teenagers.

Conclusion

The present study examines the Influence of emotion regulation and impulse control on aggressive behaviour among selected secondary school studentsin Lagos. The findings demonstrated that students with higher levels of emotion regulation ability exhibited significantly lower tendencies toward both verbal and physical aggression, underscoring the critical role of emotional processes in shaping teenage behavioural outcomes. From an educational psychology perspective, the study highlights emotion regulation as a pivotal construct in understanding students' behavioural dynamics within the school environment. Emotional competence not only influences interpersonal relationships and classroom conduct but also contributes to overall academic engagement and mental well-being. Therefore, integrating emotional regulation training into educational programs can enhance both cognitive and affective domains of learning, creating a more supportive and less conflict-prone school climate. The implications for teenager development are equally significant. During adolescence, when emotional intensity and social pressures peak, the ability to manage emotions adaptively can determine the trajectory of personal and social development. By fostering emotion regulation skills, schools and families can help teenagers navigate challenges more effectively, reducing aggression and promoting empathy, resilience, and self-control—traits that are essential for successful transition into adulthood.

In conclusion, the study reaffirms that emotion regulation is not merely an individual psychological attribute but a developmental competence shaped by educational, familial, and social contexts. Strengthening this ability among secondary school students represents a crucial step toward mitigating aggressive behaviours and fostering holistic development. Consequently, sustained collaborative efforts among educators, parents, policymakers, and mental health professionals are essential to build emotionally intelligent learning environments that promote peace, discipline, and positive youth development in Lagos and beyond.

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