



Correlates of Adverse Childhood Experiences (ACES), Emotional Regulation, and Self-Esteem among In-School Adolescents in Ibadan, Nigeria

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Abstract: The study examined the effects of adverse childhood experiences on low self-esteem and difficulties in emotional regulation among in-school adolescents in Ibadan, Oyo State, Nigeria. A descriptive survey design was used with a target population of 13- to 19-year-old adolescents selected through a three-stage random sampling technique. The sample comprised 300 adolescents, which consisted of 100 randomly selected participants from each of the three randomly chosen local government areas. Data were subjected to adapted scales measuring ACEs, self-esteem, and emotional regulation difficulties, including the ACEs scale, Rosenberg Self-Esteem Scale, and the Emotion Regulation Questionnaire; all had good reliability. The descriptive and inferential statistics such as Pearson's Product Moment Correlation and Multiple Regression Analysis were used to test the relationships and contributions of ACEs to the psychological outcomes. Findings are expected to open up new insights into how adverse childhood experiences psychologically affect affected adolescent students while further guiding the development of interventions in educational settings.

Keywords: Adverse Childhood Experiences (ACEs), Self-esteem, Emotional regulation, In-school adolescents

1. Introduction

Adverse Childhood Experiences (ACEs) has witnessed remarkable surges in global research as it directly affects physical, emotional, and psychological

growth. Many potential traumatic events that can happen in childhood such as abuse, neglect, household dysfunction, and exposure to violence are also included in ACEs. There are countless findings showing how ACEs affect life-long health and well-being and finally have adverse relationships with mental health disorders, substance abuse, chronic diseases, or several behavioural problems (Bellis et al., 2019). In global contexts, the study of ACEs has evolved from predominantly studying the individual experiences to transmission from generation to generation and finally social impact. Currently, a thorough understanding of ACEs has been acclaimed as very important to develop appropriate public health policies that reduce child trauma and its effects.

Globally, the prevalence of ACEs is high in war-torn and economically depressed countries dominated by social instability. Research has been extensive in developed nations, primarily North America and Europe, into much long-term effects that childhood adversity poses on the individual, including linking incidents of ACE to a wider spectrum of enduring negative outcomes in life (Finkelhor, 2020). The many countries continue to experience difficulties in eliminating some root causes of ACEs such as income inequality, some cultural practices, and weak systems of child protection. The world, however, is shifting into joint-integrated approaches involving multi-sectorial collaborative participation, such as healthcare, education, and social services, in dealing with the multilayer impacts of ACEs.

Adverse Childhood Experiences in Africa compared to other continents have been given less attention, even with emerging evidence showing high prevalence of childhood adversity across the continent. The cultural and socio-economic landscape of many African countries presents unique challenges in studying ACEs because poverty, communal violence, and child labour are commonplace. However, recent research continues to unveil the extensive nature of childhood adversity within the populations within Africa, particularly in contexts of conflict, migration, and limited social services (Hoffman et al., 2021). The complicated nature of childhood in Africa often proves an obstacle to doing ACEs, requiring that culturally sensitive, local contextualised interventions be applied.

Some regions in Sub-Saharan Africa bear particular brunt regarding recognition and addressing kinds of ACE impacts. With poverty rates being high, widespread orphanhood, and childhood exposure to armed conflict, the region carries a heavy burden of childhood trauma. There are studies indicating the possible adverse effect prolonged exposure to violence and instability has on the psychological well-being of children (Rojas et al., 2020). In countries like South Sudan, the Democratic Republic of the Congo, and Somalia, where children grow up under conflict, those are under extreme stress doing different forms of adversity, which can have long-lasting effects on cognitive and affective development. Initiatives designed to address such effects are increasingly gained momentum, but the issue remains for comprehensive intervention due to poor and inadequate child protection mechanisms and poor mental health services in their regions.

Although recognition of the adverse childhood experiences (ACEs) as a public health issue is taking root in Nigeria, gaps still exist in the areas of awareness and intervention. Broad poverty, internal displacement, and high communal conflicts are some of the threats Nigeria confronts, and most of which tend to yield a high-level incidence of ACEs. Nigeria has combined some aspects of child protection within its social policies, but this rarely works as there are not enough established systems and resources to cover the broad scope of the problem. Stigma on issues of mental health and child trauma has also created barriers for open discourse on ACEs and their impact on children and adolescents (Olayinka et al., 2020). Given the rich and diverse cultural and socioeconomic differentials in Nigeria, which will provide different lenses regarding experiences and coping methods during adversity, it is vital to interrogate ACEs in relation to Nigeria.

There is an increasing awareness about ACEs in the southwestern region of Nigeria (Sekoni and Danja, 2024; Omopo, Offor, & Ogunbowale, 2024; Offor, Ogunbowale, & Omopo, 2025), but little research is available on this. Ibadan being one of the largest urban centres in Nigeria determines a combination of the heritage traditional cultural practices with the dynamics of modern socio-economic practices. Adverse childhood experiences in this context are thought to be related to urbanisation, family structures, and socio-economic inequalities. Localised studies have begun to address diverse forms of childhood trauma, such as domestic violence and child neglect, as determinant factors of mental health among children in Ibadan. The impact of ACEs at Ibadan promises to be most severe, as this city hosts a large population of impoverished vulnerable children under spell of urban poverty, unavailability of health services, and exposure to violence. Unfortunately, much of the research on ACEs in southwest Nigeria is still in the early stages, indicating the need for more targeted investigation into how such experiences affect the population here, particularly in urban settings such as Ibadan. Adverse Childhood Experiences might result in (ACEs) low self-esteem and difficulties in emotional regulation. Investigating these outcomes is crucial since they will greatly influence the social functioning and academic performance of adolescents despite being overshadowed by nagging issues such as depression and anxiety. Construct interventions to define these concerning factors while their effects on resilience and emotional wellbeing within the group can be improved.

Common psychological manifestations of Adverse Childhood Experiences (ACEs) include: low self-esteem as early trauma has a rather profound effect on one's conception of self-worth. Higgins et al. (2021) showed that children who have suffered neglect or abuse have negative beliefs about themselves and this leads to lowered self-esteem. According to studies, ACEs such as physical or emotional ill-treatment result into feelings of inferiority and impotence, which can continue up to adolescence and adulthood. Critical in terms of understanding the relationship between ACEs and low self-esteem is the fact that, with low self-esteem comes a higher likelihood of risk behaviours such as substance abuse and self-harm (Cicchetti & Toth, 2020). Such individual gains of childhood adversity may require intervention on self-esteem.

Problems in regulating emotions have now been recognised as another psychosocial consequence of ACEs, as they often severely limit the developmental

activities that help people learn healthy coping processes. The failure of numerous ACE-affected children to gain the ability to control their feelings may be caused by many impairments of brain development, especially in relation to the roles of such an area of the brain as the prefrontal cortex, which regulates emotional responses (McCrory et al., 2021). Studies show that people with ACE history may appear to be more impulsive, anxious, and angry, demonstrating poor emotional regulation (Schimmenti et al. 2021). Importance of this relationship lies in emotional regulation dysfunctions being linked to other mental vulnerabilities for instance depression and anxiety which worsen the long-term effects of ACE; thus, an understanding of emotional regulation dysfunctions that would illustrate and inform on therapeutic interventions involving adaptive coping strategies to people affected by early adversity would be valuable.

Notwithstanding the raising awareness regarding the adverse impact of the Adverse Childhood Experiences (ACEs) on mental health, there lingers a gap in the understanding of how ACEs link to less-discussing psychological outcomes such as lowering self-esteem and difficulties in emotional regulation, especially among in-school adolescents in Ibadan metropolis. A good theoretical postulation for this study is the attachment theory. Attachment Theory (Bowlby, 1969) explains how early negative experiences shape emotional control and self-esteem. ACEs in adolescents can encourage the development of insecure attachment patterns that interfere with emotional control and a stable view of themselves. While earlier studies have concentrated on more conspicuous outcomes such as depression and anxiety, little has been explored in terms of access to the actual pathways through which ACEs affect low self-esteem and emotional issues within this particular group. In addition, culturally specific factors in southwestern Nigeria can affect how these psychological problems manifest, yet very few attempts have been made on localized dynamics within the school context. Therefore, the study seeks to fill this gap by establishing the relationship of ACEs with low self-esteem and emotional regulation problems among in-schooled adolescents in Ibadan. The study also seeks to explore the socio-cultural context which might mediate the treatment effects of ACEs on these outcomes toward informing culturally appropriate interventions for improving adolescent mental health and resilience within educational environments.

1.1 Purpose and Objectives of the Study

The study is generally intended to look at the relationship between Adverse Childhood Experiences

(ACEs), low self-esteem, and emotional regulation difficulties of in-school adolescents in the Ibadan metropolis. Out of this, the study's interest is to assess how ACEs together and alone contribute to these two psychological outcomes-low self-esteem and emotional regulation difficulties-in this particular population. The study specifically aims to:

- assess the relationship between ACEs, low self-esteem, and emotional regulation difficulties among in-school adolescents in Ibadan metropolis.
- determine the joint contribution of ACEs to low self-esteem and emotional regulation difficulties among in-school adolescents in Ibadan metropolis.
- examine the relative contribution of each type of ACE (physical abuse, neglect, household dysfunction) to low self-esteem and emotional regulation difficulties among in-school adolescents in Ibadan metropolis.

1.2 Hypotheses

The following hypotheses were tested at 0.05 level of significance:

- There is no significant relationship between Adverse Childhood Experiences (ACEs), low self-esteem, and emotional regulation difficulties among in-school adolescents in Ibadan metropolis.
- There is no significant joint contribution of Adverse Childhood Experiences (ACEs) to low self-esteem and emotional regulation difficulties among in-school adolescents in Ibadan metropolis.
- There is no significant relative contribution of each type of Adverse Childhood Experience (physical abuse, neglect, household dysfunction) to low self-esteem and emotional regulation difficulties among in-school adolescents in Ibadan metropolis.

2. Methodology

This study, a descriptive survey design, investigated the correlates of Adverse Childhood Experiences (ACEs) on low self-esteem and emotional regulation difficulties among in-school adolescents in Ibadan, Oyo State, Nigeria. The target population consisted of adolescents aged 13 to 19 years from Ibadan metropolis, selected using a three-stage random sampling technique. In the first stage, three local government areas (LGAs) (Ibadan North, Ona-Ara, and Ibadan Southwest) were randomly chosen, and one secondary school was randomly selected from

each LGA. A total of 300 adolescents (100 from each school) participated in the study. Data were collected using adapted scales measuring ACEs, low self-esteem, and emotional regulation difficulties, including the ACEs scale, Rosenberg Self-Esteem Scale, and the Emotion Regulation Questionnaire. These scales demonstrated reliability and validity in previous research, with Cronbach's alpha coefficients of 0.88 for self-esteem and 0.85 for emotional regulation. The researchers administered the questionnaires during school hours, providing clear instructions to participants and addressing any questions.

Both descriptive and inferential statistics were used in the analysis of data. Demographic data and responses

were summarised by descriptive statistics, such as frequencies, percentages, means, and standard deviations. Correlational and multiple regression analyses were used to determine how ACEs influence the psychological outcomes measured in the study. The strength and direction of relationships involving ACEs were revealed by regression analysis of multiple variables through joint and relative contribution to self-esteem and emotional regulation, while Pearson's correlation provided evidence for the relationships. All hypotheses were tested at 0.05 level of significance to capture the statistical significance of any results. This facilitated the identification of patterns and correlations among variables, thus shedding light on the psychological effects of ACEs on the development of adolescents in Ibadan.

3. Results and Discussion

Socio-Demographic Representation of the Participants

Table 1: Socio-Demographic Representation of Respondents

Variable	Category	Frequency	Percentage (%)
Age	13-15 years	85	28.3%
	16-17 years	160	53.3%
	18-19 years	55	18.3%
Gender	Male	135	45%
	Female	165	55%
Class	JSS 1	50	16.7%
	JSS 2	85	28.3%
	JSS 3	70	23.3%
	SS 1	60	20%
	SS 2	35	11.7%
Religion	Christianity	190	63.3%
	Islam	100	33.3%
	Others (Traditional)	10	3.3%

Table 1 illustrates the socio-demographic characteristics of 300 respondents used in the study. Over half (53.3%) are aged 16-17 years, while 28.3% are aged 13-15 years. Finally, 18.3% of the respondents are aged between 18 and 19 years. With regard to gender distribution, there is a slight imbalance on the side of females at 55% against 45% males. For the class distribution, it comprises 16.7% from JSS 1 with 28.3% from JSS 2, 23.3% from JSS 3, 20% from SS 1, and finally, 11.7% from SS 2. In religion, a majority of the respondents consider themselves Christians which number at 63.3% with 33.3% Muslims followed by the 3.3% of respondents who have other religions, including traditional ones. This demographic distribution takes a wide sweep of adolescent population in Nigeria (specifically Ibadan, Oyo State).

Hypothesis 1: There is no significant Relationship between Adverse Childhood Experiences (ACEs), Low Self-Esteem, and Emotional Regulation Difficulties

Table 2: Relationship between Adverse Childhood Experiences (ACEs), Low Self-Esteem, and Emotional Regulation Difficulties

Variable	Pearson Correlation (r)	Significance (p-value)
ACE and Low Self-Esteem	-0.40	0.001*
ACE and Emotional Regulation Difficulties	-0.50	0.000*

Table 2 outlines the findings of Hypothesis 1 which examines correlations among ACEs, low self-esteem, and difficulties in emotional regulation among in-school adolescents in the Ibadan metropolis. The respective Pearson correlation coefficients (r) for ACE and low self-esteem are -0.40, while for ACE and emotional regulation difficulties is -0.50 with both correlated pairings significantly at the 0.05 level ($p < 0.05$). This means the high ACE score correlates with low self-esteem and high emotional regulation difficulties in adolescents.

The above findings of Hypothesis 1 showed that the relationships between ACE with low self-esteem and emotional regulation difficulties are negative. This means that adults experience more ACE, thus cause low self-esteem, which hinders them from effectively dealing with their emotive responses and failures in such a situation. Such scenarios have also been seen previously, where ACE was thought to be a disruption in the psychological development of an individual, resulting in long-term emotional and self-perception issues (Felitti et al., 1998; Cicchetti & Rogosch, 2018). Worse, problems with emotional regulation only add fuel to the fire since they make this mismanagement worse for an adolescent, causing a cycle in which mismanagement in emotion also impacts self-esteem and issues related to social behaviours further down the line.

Studies like Felitti et al. (1998), Cicchetti & Rogosch (2018), correlate ACEs with poor self-esteem and emotional dysregulation that spring cognitive and emotional impairments. Complementary evidence according to Masten et al. (2019) suggests that interventions on either emotional regulation or self-esteem are able to reduce some adverse effects associated with ACEs. This study advocates the need for environments supportive of adolescents to acquire resilience and adjust their emotional skills, especially with those who come from unfriendly childhood.

Hypothesis 2: There is no Significant Joint Contribution of Adverse Childhood Experiences (ACEs) to Low Self-Esteem and Emotional Regulation Difficulties

Table 3: Joint Contribution of Adverse Childhood Experiences (ACEs) to Low Self-Esteem and Emotional Regulation Difficulties

Predictor Variable	R	R ²	F-value	Significance (p-value)
ACE, Low Self-Esteem, and Emotional Regulation Difficulties	0.65	0.42	35.57	0.000*

The outcomes of Hypothesis 2 were outlined in Table 3, which examined the joint effect of Adverse Childhood Experiences (ACEs) on low self-esteem and emotional regulation deficits among in-school adolescents in Ibadan metropolis. In general, the multiple regression analysis indicates a significant joint effect of ACE on both dependent variables since the R-square coefficient for joint contribution is 0.42, indicating that ACE accounts for 42% of condition variance in both dependent variables, that is, low self-esteem and problems in emotional regulation. The corresponding F-value of 35.57 was also shown as significant at $p < 0.05$, indicating that ACE could be a significant predictor of said psychological outcomes when viewed collectively.

The results from Hypothesis 2 indicate that ACE indeed has a significant joint contribution to low self-esteem and emotional regulation difficulties. The 42% variance, therefore, shows that, however limited ACE may be among many factors that contribute to the aforementioned correlate outcomes, it plays a significant role in shaping adolescents' emotional and self-perceptual functioning. These findings reinforce earlier studies that noted accumulative effects of ACE on the mental health of adolescents (Chapman et al., 2013; Shonkoff et al., 2012). High-ACE adolescents manifest comparatively worse emotional-self regulation and do not feel worthy of themselves; therefore, interventions that would help address traumas as well as build emotional resiliency may maximise their impact.

Previous studies have backed this outcome, with many noting that ACE influences psychological outcomes, including self-esteem and emotional regulation. For example, Chapman et al. (2013) and Shonkoff et al. (2012) found that the incidence of adverse childhood experience increases the likelihood of emotional and cognitive difficulties, from which the affected might suffer such as poor emotional regulation and low self-esteem. These might, in turn, relate to academic and social well-being among adolescents. Hence, it may be presumed that this further calls for early interventions and psychological support to bring down the pernicious effects of ACE and foster healthier emotional development and self-concept in adolescents.

Hypothesis 3: There is no Significant Relative Contribution of each type of Adverse Childhood Experiences (ACEs) to Low Self-Esteem and Emotional Regulation Difficulties

Table 4: Relative Contribution of Each Type of Adverse Childhood Experiences (ACEs) to Low Self-Esteem and Emotional Regulation Difficulties

Predictor Variable	β (Standardised Coefficient)	t-value	Significance (p-value)
Physical Abuse	0.23	4.12	0.000*
Neglect	0.31	5.43	0.000*
Household Dysfunction	0.18	3.25	0.001*

Hypothesis 3 was tested with reference to the following results: relative contributions of each type of Adverse Childhood Experience, i.e. physical abuse, neglect, and household dysfunction, to low self-esteem and difficulties in emotional regulation among in-school adolescents in Ibadan metropolis. The standardised regression coefficients (β) indicate that neglect ($\beta = 0.31$) has the highest relative contribution followed by physical abuse ($\beta = 0.23$) and household dysfunction ($\beta = 0.18$). All three types of ACEs have statistically significant contributions to the psychological outcomes at $p < .05$, demonstrating their impact on the adolescents' self-esteem and emotional regulation difficulties.

Findings from Hypothesis 3 suggests that differential kinds of ACEs made both an independent and significant contribution to low self-esteem and difficulties in emotional regulation among in-school adolescents. Beyond such, neglect, representing the greatest relative contribution, leaves adolescents feeling particularly worthless and emotionally unstable. Physical abuse has a marked effect on both increasing emotions' dysregulation and impairing ones' sense of self in a poor manner. Household dysfunction-the lesser relative contributor-is not insignificant as emotional instability and image of self can be informed by this type of family stress related to instability at home.

These findings confirm earlier studies emphasising unique but interdependent effects of various types of adverse childhood experiences on psychological outcomes in adolescents. For example, Springer et al. (2007) and Gilbert et al. (2015) found that neglect and physical abuse are among the very harshest types of ACEs which consequently have prolonged effects on mental health, such as low self-esteem and emotional regulation troubles. Anda et al. (2006) showed that household dysfunction such as either parental separation or substance abuse can create a chaotic home environment that polluted emotional well-being. The present study reiterates how it is necessary to consider every type of ACE in the development of interventions to improve adolescent mental health outcomes.

4. Conclusion

The present study assessed the interrelationship of adverse childhood experiences (ACEs), low self-esteem, and emotional regulation difficulties among adolescents attending school in Ibadan metropolis. The results reveal that ACEs, especially neglect, physical abuse, and family dysfunction, predicted difficulties in emotional regulation and low self-

esteem among the adolescents. These findings bear witness to the severe impact of childhood trauma on the adolescent's mental health and necessitate targeted interventions and support networks in addressing these issues.

5. Implication for Policy, Theory, and Practice

The policy, theory, and practice impact of the study findings is significant. At the same time, policymakers are expected to come up with strategies that will facilitate interventions that address the influences of ACE's on adolescent mental health, such as including emotional regulation training and self-esteem-building programmes in school curricula. Finally, theoretical frameworks on trauma and development will be shaped more dynamically with the introduction of specific types of ACE effects. In practice, mental health professionals should be geared to identify and therefore address the emotional and psychological needs of adolescents affected by ACEs so that early intervention strategies can be made effective and accessible.

6. Recommendations

Based on the outcome of the study, the following recommendations were made:

School-Based Mental Health Programmes Implementation: Emotional regulation training as well as counselling should be integrated into rehabilitation services that can help adolescents overcome the effects of ACEs, among other services in schools. These identification-early approaches should be risks targeted and tailored directed to children's needs.

Positive Parenting Awareness Campaigns for Parents and Caregivers: Stakeholders should organise awareness campaigns and workshops to equip parents and caregivers with the knowledge of the long-term consequences of neglect, abuse, and family dysfunction. Bring more awareness to good practices in parenting to nurture a friendlier environment for adolescents at home.

Peer Mentorship Support through Community Networks: Through community networks and peer mentorship schemes, affected adolescents can have safe spaces for disclosing experiences while being resilient and having access to emotional support from trusted adults and peers.

Policy-level Interventions for Child Protection and Welfare:

The government and policymakers should, therefore, tighten the laws of child protection and social welfare to prevent and mitigate the losses from ACEs through schools, health care, and social work in early apprehension and intervention of children with the cases of abuse or neglect.

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