

Original Research Report



Assessment of the Association between Adverse Childhood Experiences and Self-Esteem in a Sample of Teenage Students in Nigeria

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Abstract: This study explored the association between adverse childhood experiences (ACEs) and the self-esteem of teenage students in Nigeria. The study was conducted using a correlational survey design. Using a purposive sampling procedure, 30 junior secondary school students were selected from four public junior schools in Nsukka Metropolis, Enugu State, Nigeria. A researcher-structured questionnaire was used to assess whether students in four schools in the metropolis had been exposed to ACEs. A 10-item instrument- the Adverse Childhood Experience Questionnaire (ACE-Q) by Felitti et al. (1998) and a self-report scale- Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965) were adopted to collect data on the students' ACEs and self-esteem respectively. Results showed that there is a moderate negative relationship between adverse childhood experiences and students' self-esteem ($R=-.484$). The coefficient of determination (.234) shows the variation in students' self-esteem due to adverse childhood experiences. Furthermore, the results showed that gender has a low moderating effect on the association of ACEs with self-esteem among students ($R=-.485$). It was recommended, among others, that the government should ensure that policies are formulated to reduce the incidence of ACEs and the harms associated with ACEs when they occur. It is important that schools provide adequate counselling services to students who have low self-esteem as a result of ACEs. Teachers and school psychologists should also make a conscious effort to give adequate social and psychological support to children who are prone to low self-esteem as a result of prior exposure to ACEs.

Keywords: ACEs, Childhood Experiences, Gender, Self-esteem, Teenage students

1. Introduction

Throughout adulthood, childhood memories leave strong impressions on the psyche of individuals (Kanatsouli, 2021). Childhood experiences affect their behaviour as an adolescent and adult (Narayan et al., 2021). During childhood, children may experience negative and unpleasant events that adversely affect them. Children who are exposed to adverse childhood experiences (ACEs) typically suffer unpleasant, painful and potentially traumatising events in their childhood stage of life. There is a possibility that such events will result in battering, abuse, neglect, and violence in the home (Silverstein et al., 2023). In addition, ACEs are often associated with strange and abusive incidents that negatively impact children's emotions and functioning (Liu et al., 2023) ACEs can be operationally defined as prominent and harmful childhood events that occur within the family cycle or social environment and range in severity. Most of the time, this condition causes mental or physical distress for the child, which can harm their overall development. Family, environment, and societal influences on children affect them and ultimately shape their adult personality.

Adverse childhood experiences can take many forms, including economic hardship, emotional abuse, physical abuse, and household violence. All of these affect the child's psychological and emotional wellbeing (Eseadi et al., 2016; Gomis-Pomares & Villanueva, 2020; Merrick et al., 2017; Sheffler et al., 2020). In 2014 and 2015, approximately 1 billion children worldwide suffered from ACEs (Bellis, 2019). According to Hills et al. (2016), Latin America and North America account for 60%, Europe for 70%, and Asia and Africa for 80%. The excruciating consequence of ACEs on children's development and growth can be both short- and long-term, regardless of their age (Hillis et al., 2016). Children of all ages seem to suffer from ACEs, which can lead to lifelong behavioural issues (Gomis-Pomares & Villanueva, 2020). The long-term effects of ACEs include suicidal attempts, self-injury, social isolation, and poor self-image (Rytala-Manninen, 2018). According to Daines et al. (2021), ACEs can impact adolescent development by reducing self-esteem, which ultimately leads to a variety of negative consequences. In early experiences, children's self-esteem is one of the most critical components of their emotional health (Khodabandeh et al., 2018). When one's self-esteem is impacted by any other circumstances like ACEs, it could lead to a lowered self-esteem and other psychological symptoms.

In several studies, ACEs were associated negatively with children's self-esteem (Folayan et al., 2020; Shattnawi et al., 2022; Shah et al., 2020). Several research reports have shown that exposing

children to ACEs could lead to a lower self-esteem while those who have little or no exposure to ACEs grew up with higher concept of themselves (Doi et al., 2022; Folayan et al., 2020; Kim et al., 2022). The impact of early exposure to ACEs may have a significant impact on teenagers' mental health and self-esteem. Teenagers who have had a regular prior exposure to ACEs have lower self-esteem than children who are exposed to ACEs less frequently. Teenage children with a prior regular exposure to ACEs are more prone to poor parental support and care, which results in a low sense of self-worth, self-concept and self-esteem (French, 2022).

A measure of differences exists in prevalence and types of ACEs. According to Haahr-Pederson (2020), female children are more prone to physical, sexual and emotional abuse. Due to the fragile and feminine nature of girls, several studies have shown that females experience more ACEs than the males (Jones et al., 2022). In specific terms, Baglivio et al. (2014) reported that about 29% female youth had an average of six or more ACEs while males had only but 14%. It is however, a critical issue to be explored in this study. In the literature, extensive reports have been published on the global prevalence of ACEs among adolescents. There is a limited and scanty literature about the subtle impact of ACEs on some key cognitive variables like self-esteem among teenagers in Nigeria, despite the extensive ACEs literature base. Using gender as a moderating variable, the current research survey study aimed to determine the subtle influence of these ACEs in the teenage population in Nigeria.

1.1.Statement of Problem

Adverse childhood experiences have variously manifested among various populations in Nigeria. ACEs commonly refer to all the negative and abusive physical and emotional experiences and incidents that happen to children as they grow up. In Nigeria, it is a common practice that there are several recorded and unrecorded incidents of sexual abuse, child battering or cruelty against housemaids. In Nsukka Metropolis, some children of school age are made to hawk goods in long distances during school hours. Oftentimes, there are cases of home violence and family dysfunction leading to divorce among couples. Children in these dysfunctional homes are subjected to very ugly experiences which sniffs life out of the supposed rosy memories of childhood nostalgia. It is however very worrisome that these sets of children who have had these experiences grow up with the ripple effect of these ACEs, thereby developing symptoms of psychological and emotional distress resulting in a very dampened self-esteem. It is however very expedient to carry out a study to understand more comprehensively how ACEs subtly impacts on the self-esteem of Nigerian children

exposed to ACEs.

1.2. Purpose of the Study

The general purpose of this research is to ascertain the impact of ACEs on self-esteem of students. Specific purpose is to:

- (a) Find out the relationship between ACEs and students' self-esteem
- (b) Find out the moderating influence of gender on the relationship between ACEs and students' self-esteem

1.3. Research Questions

- (a) What is the relationship between ACEs and students' self-esteem?
- (b) What is the moderating influence of gender on the relationship between ACEs and students' self-esteem?

2. Materials and Methods

2.1. Design for the Study

A correlational survey design was used in this study. Correlational surveys are used to establish patterns of relationships between two or more variables (Cherry, 2018). A correlational survey study is a non-experimental study, which means no variables are controlled or manipulated. Having adopted correlational survey design, the researcher and research assistants collected data using the measures adopted for the study.

2.1.1. Ethics Statement

The Faculty of Education Research Committee at the University of Nigeria provided ethical clearance for this research survey. In writing, the participants and their parents consented for the students to take part in the study, which was endorsed by the Secretary of the Board, Enugu State Universal Basic Education Board.

1.2 Area of the Study

The Nsukka urban metropolis is located in the Enugu State of Nigeria. It is a university town. Nsukka, an urban metropolis, is known for its numerous hills and arable land. It is primarily inhabited by artisans and farmers who settle in nuclear and extended family units. As a result of the community parenting pattern prevalent in some African communities, children in these families are naturally predisposed to adverse childhood experiences.

2.3. Population and Sample

The study population consisted of all junior secondary school 1 students in Nsukka Urban Metropolis in Enugu State, Nigeria. A total of 30 junior secondary school students ($n = 4$) from four public secondary schools in Enugu State, Nigeria, were included in the study. In order to collect data, a targeted sampling procedure was used. The researcher used a structured questionnaire to identify students exposed to Adverse Childhood Experiences (ACEs) across the four schools in the metropolis. The four schools were purposively selected based on core urban characteristics.

2.4. Instruments for Data Collection

In this study, two instruments were used: the Adverse Childhood Experience Questionnaire (ACEQ) created by Felitti et al. (1998), consists of ten items that measure common adverse childhood experiences (i.e., emotional, sexual and physical; neglect; domestic violence; mental illness, parental divorce, incarceration, or loss of a loved one; and household substance use and abuse). All the student participants were instructed to indicate, in affirmation or otherwise, where applicable, they had a specific form of ACEs before turning twelve years of age. After, this, the researcher summed up the total of responses to the ACEs questionnaire to produce a cumulative score on ACEs, which ranges from 0—10; higher scores however indicate a severe ACEs. The Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965) is a globally used self-report scale used to measure individuals' self-esteem. The RSES has ten items on a four-point response scale, ranging from strongly agree to strongly disagree. RSES scores range from 0-30; scores between 15 and 25 are considered normal, while scores below 15 indicate low self-esteem. In this research, the ACEQ and RSES had reliability scores of 0.919 and 0.877 Cronbach's alphas respectively.

2.5. Data Collection Technique

Two research assistants assisted with the collection of data. The researcher used a structured questionnaire as a diagnostic tool to identify ACEs among students across four schools in the metropolis. Adverse Childhood Experience Questionnaire (ACEQ) and Rosenberg Self-Esteem Scale (RSES) were administered by research assistants on site.

2.6. Data Analysis Technique

Regression analysis and ANOVA were used to analyse the data in this study. Basically, regression analysis was used to analyse relationships between variables. Essentially, this statistical tool was used

to determine the direction, pattern and strength of relationships among variables in correlational survey designs.

3. Results and Discussion

3.1. Demographic and descriptive statistics of the participants

The biodata of the participants includes age and gender. The mean age of the participants was 12.56. Furthermore, with respect to gender, male students constituted 48% of the population while female students constituted 52% of the population.

Table 1: Descriptive analysis and gender difference in participants' responses

	Male Participants (N = 14)	Female Participants (N=16)	F	Sig.	n ² partial
	Mean (SD)	Mean (SD)			
ACES	22.42 (6.210)	18.13 (4.06)	5.168	.031	.156
SSE	20.00 (8.00)	18.81(9.65)	.132	.719	.005

Table 1 show that male students had higher mean ratings of ACES than female with lower dispersion of individual mean scores. The ANOVA result shows that there was a significant difference in mean ratings of male and female students as measure by ACES scale $F(1, 29) = 5.168$, $p = .031$, with a small effect size of .156. Furthermore, male students had higher mean ratings of self-esteem with lower dispersion of individual scores compared with their female counterparts. ANOVA analysis shows that the difference was not significant, $F(1,29) = .132$, $p = .719$, with insignificant effect size of .005.

3.2. Research Question one: What is the relationship between ACES and students' self-esteem?

Table 2: Linear regression analysis of the impact of ACEs on the students' self-esteem

Model		Unstandardized Coefficients		Standardized Coefficients		T	Sig.	Decision
		B	Std. Error	Beta	R			
1	(Constant)	34.849	5.477					
	ACEs	-.769	.263	-.484		-2.928	.007	Sig.

a. Dependent Variable: Self-Esteem

The data in Table 2 shows the linear association between students' ACEs and self-esteem. The result shows that there is a moderately negative association between ACEs and students' self-esteem ($R = -.484$). The coefficient of determination $r^2 = .234$ shows the variation in students' low self-esteem due to adverse childhood experiences. This denotes that students that had adverse

experiences are bound to have low self-esteem. Therefore, adverse childhood experience is negatively related to students' low self-esteem. Furthermore, linear regression t-test shows that there is substantial negative relationship between ACEs and students' self-esteem, $t = 6.362$; $P = .007$, at 0.05 level of significance.

3.3. Research question two: What is the moderating effect of gender on the association between ACEs and students' self-esteem?

Table 3: Multiple regression analysis of moderating influence of gender

Model		Unstandardized Coefficients		Standardized	R	r ²	T	Sig.	Decision
		B	Std. Error	Beta					
1	(Constant)	34.131	7.619		-.485	.235	4.480	.000	
	Gender	.408	2.952	.024			.138	.891	Not Sig.
	ACEs	-.763	.271	-.480			-2.818	.009	Sig.

a. Dependent Variable: Self-Esteem

In Table 3, multiple regression analysis was carried out to explore the moderating influence of gender on the association between ACEs and students' self-esteem. The result shows that moderating influence of gender on ACEs on students' self-esteem is low ($R = -.485$). Furthermore, multiple regression analysis shows that moderating influence of gender on the association between ACEs and students' self-esteem was not significant, $t = .138$; $p = .891$, at 0.05. Hence, gender is not a significant moderator of the relationship between ACEs and students' self-esteem.

The results show a moderately negative association between ACEs and students' self-esteem. Using the coefficient of determination as a basis for judgment, ACEs are responsible for self-esteem variation among students. Thus, students with ACEs are evidently prone to low self-esteem. Consequently, adverse childhood experiences are negatively associated with low self-esteem among students. This study confirms the findings of Shattnawi et al. (2022) who reported low self-esteem scores in students who experienced emotional neglect, bullying, sexual and physical abuse and household violence. A study conducted by Zhang et al. (2022) found that ACEs negatively impact children's depressive symptoms and self-esteem. In other words, children who scored higher on ACEs had lower self-esteem and more depressive symptoms. The results of this study are also consistent with those of Lawal and Abdulmalik (2020) who found that individuals with previous exposure to ACEs had the likelihood of experiencing low self-esteem. Furthermore, the result shows that moderating influence of gender on ACEs on students' self-esteem is low. Furthermore, multiple

regression analysis shows that moderating influence of gender on the association between ACEs and students' self-esteem was not significant. Hence, gender is not a substantially moderating the association between ACEs and students' self-esteem. This finding is buttressed by the findings of Shattnawi et al. (2022) who reported that both the males and the females with ACEs had nearly the same mean scores, and their self-esteem scores were not significantly different. In contrast, Zhang et al. (2022) found that depressive symptoms and low self-esteem were more prevalent among males than females with ACEs. There is no abundant evidence that gender is a critical moderating variable determining the self-esteem of individuals with ACEs. Overall, this study indicates that ACEs significantly impact self-esteem. It is more likely that children who experience ACEs will develop low self-esteem as they grow up. Developmental wellbeing of children could be compromised and persist into adulthood as a result of this. Research should explore the impact of ACEs on other psychological variables, such as resilience.

The practical implications of the findings of this study for school counselling psychologists is that children who had prior experience of ACEs while growing up might have issues with their self-esteem especially in the learning environment. Therefore, psychologist and guidance counsellors should look out for students who have low self-esteem and offer the necessary social and psychological supports needed. The inability of the researcher to study other critical demographic characteristics of the students such as parental involvement, socioeconomic status and personality types might affect the generalizability of the findings. It is imperative therefore that future research in this area should try to capture these critical issues about the students.

4. Conclusion

The findings of the current survey are indicative of the fact that ACEs have a highly debilitating impact on students' self-esteem. ACEs are commonly experienced by children and there is a persistent research agreement that it poses a greater chance of poorer future emotional outcomes. It is recommended that relevant government agencies should ensure that policies are formulated to reduce the incidents of ACEs and to reduce the harm associated with ACEs when it occurs. Adequate counselling services should be provided by schools to offer services to students who have low self-esteem as a result of ACEs. Parents and caregivers should also be encouraged to eliminate all forms of behaviour and actions that predisposes children to ACEs right from the homes.

Acknowledgements

The author is grateful to all the research assistants, school principals and teachers who facilitated the research study.

Conflict of Interest

The author has no conflict of interest to declare.

Author Contributions

Conceptualization: OVO. Sample collection: OVO, Formal analysis: OVO. Funding acquisition: OVO, Methodology: OVO, Data analysis: OVO, Writing – original draft, review & editing: OVO assistants.

Data Availability Statement

The original contributions presented in the study are included in the article. Further enquiries can be directed to the author.

Funding Information

No funding was received for the conduct of the study.

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Publisher: Department of Home Economics and Hospitality Management Education, University of Nigeria, Nsukka 41001, Nigeria

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