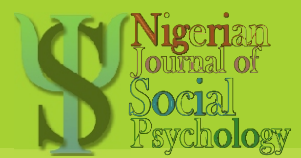


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Self-Esteem and Psychological Distress: Unravelling the Nexus with Aggression, Anxiety and Depression among University Youths

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Abstract

This study investigated the nexus between self-esteem and psychological distress, with focus on aggression, anxiety, and depression among undergraduate youths in South Eastern Nigeria. A total of 700 participants (male = 350; female = 350; M age = 19.85 years) were selected through stratified random sampling from five universities. Data were collected using standardized instruments: the Index of Self-Esteem (Hudson, 1982), Buss–Perry Aggression Questionnaire (Buss & Perry, 1992), State–Trait Anxiety Inventory (Spielberger, 1983), and Self-Rating Depression Scale (Zung, 1965). Data analysis, using analysis of variance (ANOVA), revealed that participants with low self-esteem exhibited significantly higher levels of aggression ($F(1,700) = 11.01, p < .05$) and depression ($F(1,700) = 19.06, p < .05$) than those with high self-esteem. No significant difference was found in anxiety across the two groups. The findings align with the Sociometer and Terror Management frameworks, suggesting that self-esteem functions as a psychological buffer that moderates emotional responses and social adjustment. These results underscore the importance of self-esteem enhancement in interventions for youth aggression and depression in tertiary institutions.

Keywords: self-esteem, psychological distress, aggression, anxiety, depression, university youths, Nigeria

Introduction

Self-esteem — the evaluative and affective appraisal an individual holds about the self — has long been regarded as a central correlate of psychological adjustment (Leary & Baumeister, 2000; Rosenberg, 1965). Low self-esteem has been implicated in a range of maladaptive outcomes, including depressive symptomatology, anxious distress, and aggressive behaviour (Donellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005). However, despite its conceptual prominence, empirical findings linking self-esteem to important mental-health outcomes have been mixed: effect sizes vary, moderators and mediators abound, and recent inquiries have emphasized temporal instability (lability) of self-esteem rather than high or low levels as a key vulnerability factor (Kashdan, Uswatte, Steger, & Julian, 2006). Contemporary reviews therefore call for contextually grounded, adequately powered studies that test theoretically derived hypotheses about self-esteem's relation to aggression, anxiety, and depression among young people. The present study investigates these relationships among undergraduate youths in South Eastern Nigeria.

Two theoretical perspectives frame the inquiry. First, Sociometer Theory posits that self-esteem functions as an internal gauge of one's social relational value: when perceptions of social acceptance decline, self-esteem falls and risk for adverse social and emotional responses increases (Leary & Baumeister, 2000). Recent empirical work continues to corroborate sociometer-like processes in everyday social contexts, showing that momentary fluctuations in relationship quality map onto self-evaluative shifts and downstream emotional outcomes (Willms et al., 2023). Second, Terror Management Theory (TMT) treats self-

esteem as a culturally mediated buffer against existential anxiety; higher self-esteem reduces defensiveness and anxiety in the face of mortality salience (Greenberg, Pyszczynski, & Solomon, 1997; Pyszczynski et al., 2004). Both frameworks conceive self-esteem not merely as an intrapsychic trait but as a regulator of social and existential threat responses, and together they motivate tests of associations between trait self-esteem and indicators of psychological distress.

Empirically, the relation between self-esteem and depression is among the most robust in the literature, with numerous cross-sectional and longitudinal studies reporting negative associations (e.g., Donnellan et al., 2005). Contemporary studies conducted in university contexts reinforce this pattern, indicating that lower self-esteem is associated with elevated depressive symptoms across diverse national samples (Kwok et al., 2023; Li, 2024). By contrast, evidence linking self-esteem to anxiety is less uniform. Several studies implicate self-esteem lability or low trait self-esteem in specific forms of anxiety (e.g., social anxiety, death-related anxiety), but cross-sectional associations with state anxiety are commonly weaker once covariates are introduced (Kashdan et al., 2006).

The link between self-esteem and aggression has been the subject of considerable debate. Classical perspectives suggest that low self-esteem fosters feelings of inferiority and hostility that may be externalized as aggression (Adlerian, neo-Freudian accounts), and several longitudinal studies have linked low self-esteem in adolescence to later antisocial and aggressive outcomes (Donnellan et al., 2005). Nevertheless, critics have argued that observed effect sizes are modest and that the relation is conditional on moderators such as self-control, provocation, and social context (Baumeister, Campbell, Krueger, & Vohs, 2003). Recent empirical work has begun to unpack indirect pathways whereby self-esteem affects aggression via loneliness, self-control deficits, or hostile attribution styles (Hu et al., 2023). Thus, contemporary evidence suggests a nuanced relation: low self-esteem can be a risk factor for aggression in certain contexts and via specific mechanisms rather than a simple, uniform predictor.

Despite the breadth of global research, there is a comparative paucity of large, methodologically rigorous studies from sub-Saharan African university populations that simultaneously examine aggression, anxiety, and depression in relation to self-esteem. The university environment in Nigeria presents a set of stressors (academic pressure, social transition, economic challenges, and limited mental-health resources) that make youths a population of interest for mental-health research; existing Nigerian studies on self-esteem and well-being are often single-site, small-sample, or narrowly focused (local theses and journal articles), underscoring the need for larger multi-institutional inquiries.

In the light of theoretical expectations and mixed empirical findings, the present study tests three specific hypotheses in a large sample of undergraduates drawn from five universities in South Eastern Nigeria:

Hypothesis 1. Students with low self-esteem will report significantly higher levels of aggression than students with high self-esteem.

Hypothesis 2. Students with low self-esteem will report significantly higher levels of state anxiety than students with high self-esteem.

Hypothesis 3. Students with low self-esteem will report significantly higher levels of depressive symptoms than students with high self-esteem.

The study contributes to the literature by (a) testing theoretically derived predictions in a large, multi-site Nigerian undergraduate sample; (b) reporting instrument reliabilities and effect sizes for the local population; and (c) clarifying whether self-esteem level per se (rather than temporally labile self-esteem) relates to aggression, anxiety, and depression in this context. The findings have practical implications for university mental-health programs and behavioural interventions targeting youth aggression and depression.

Method

Participants

The participants comprised 700 undergraduate students (350 males and 350 females) drawn from five universities in South Eastern Nigeria: Caritas University (Enugu State), Federal University of Technology, Owerri (Imo State), Abia State University, Uturu (Abia State), Anambra State University, Uli (Anambra State), and Ebonyi State University, Ishieke (Ebonyi State). Their mean age was 19.85 years ($SD = 2.14$), ranging from 17 to 25 years. The overall population of undergraduates across these universities was approximately 61,440.

Participants were selected through stratified random sampling, which ensured proportional representation across faculties, departments, and gender. Two faculties were randomly selected from each university, and one department was randomly chosen from each faculty. From each department, 73 students were randomly drawn using a simple random technique involving coded selection sheets.

Prior to data collection, participants provided informed consent and were assured of confidentiality and voluntary participation. They were informed that the questionnaires were for research purposes only and could withdraw at any point. Ethical approval was obtained from the Department of Psychology Research Ethics Committee, Imo State University, in accordance with the Declaration of Helsinki (World Medical Association, 2013).

Instruments

Index of Self-Esteem (ISE; Hudson, 1982)

Self-esteem was assessed using the 25-item Index of Self-Esteem (ISE), designed to measure the degree of approval, respect, and satisfaction an individual feels toward the self. Items were rated on a 5-point Likert scale ranging from 1 (rarely) to 5 (most or all of the time). Example items include: “I feel that others get along much better than I do” and “I feel that I am a beautiful person.”

Higher scores indicate lower self-esteem. Hudson (1982) reported a Cronbach’s alpha of .93 and a test–retest reliability of .92. For Nigerian samples, Onighaiye (1996) established normative means of 30.89 for males and 32.04 for females.

Buss–Perry Aggression Questionnaire (BPAQ; Buss & Perry, 1992)

Aggression was measured using the 29-item Buss–Perry Aggression Questionnaire (BPAQ), which captures four dimensions of aggression: physical aggression, verbal aggression, anger, and hostility. Items were rated on a 5-point Likert scale ranging from 1 (extremely uncharacteristic of me) to 5 (extremely characteristic of me). Example items include “I get into fights a little more than the average person” and “I have threatened people I know.”

In Buss and Perry’s validation, the BPAQ demonstrated high internal consistency ($\alpha = .90$) and four subscale alphas between .76 and .84. In the current sample, the researcher established Cronbach’s alpha of .82 (Guttman split-half coefficient) and the local concurrent

validity coefficient with the Hostility subscale of the Symptom Checklist-90 (Derogatis, Lipman, & Covi, 1977) was .44 ($p < .01$) with a norm of 67.60 as the score above which aggression is indicated.

State–Trait Anxiety Inventory, Form Y-1 (STAI-Y1; Spielberger, 1983)

Anxiety was assessed using the 20-item State–Trait Anxiety Inventory (Form Y-1), which evaluates current feelings of tension and apprehension. Responses range from 1 (not at all) to 4 (very much so). Sample items include “I feel calm” and “I feel frightened.” The STAI-Y1 has reported reliability coefficients of $\alpha = .91$ for males and .93 for females (Spielberger, 1983). The Nigerian adaptation by Omoluabi (1987) yielded a test–retest reliability of .61 and concurrent validity of .69 with Zuckerman and Lubin’s Multiple Affect Adjective Checklist.

Self-Rating Depression Scale (SDS; Zung, 1965)

Depression was measured using Zung’s Self-Rating Depression Scale (SDS), consisting of 20 items covering affective, psychological, and somatic symptoms of depression. Responses were rated on a 4-point scale ranging from 1 (a little of the time) to 4 (most or all of the time). A sample item reads: “I feel down-hearted, blue, and sad.”

The SDS correlates strongly with the Hamilton Rating Scale for Depression ($r = .79$) and has high internal reliability ($\alpha = .81$). The Nigerian validation by Obiora (1995) produced a test–retest coefficient of .93. A revalidation of the scale by the researcher yielded a normative score of 37.7 for men ($n = 100$) and 40.2 for females ($n = 100$). Also a one week test-retest reliability coefficient of 0.91 was obtained using the same participants.

Procedure

The data collection process involved direct administration of the four instruments to 730 recruited participants across the five universities. After screening for completeness and accuracy, 700 questionnaires (96% response rate) were retained for analysis; 30 were excluded due to nonresponse or incomplete data.

Research assistants were trained in ethical administration and data handling. Participants were debriefed after completing the questionnaires and provided with contact information for university counselling centres should they experience any distress. No adverse emotional reactions were reported during data collection.

Design/ Statistics

The study employed a cross-sectional survey design, comparing two levels of self-esteem (high vs. low) across three dependent variables (aggression, anxiety, and depression). Data were analyzed using Analysis of Variance (ANOVA) in IBM SPSS Statistics version 25.

Descriptive statistics (means and standard deviations) were computed for all variables. The significance level was set at $p < .05$. Effect sizes were calculated using partial eta-squared (η^2) to estimate the magnitude of self-esteem’s influence on each dependent variable. This design was chosen to enable comparison of psychological distress outcomes between groups while providing a snapshot of relationships within the university population.

Results

Table 1: Mean and standard deviation scores of aggression, anxiety and depression.

Variables	Mean	of	Std Dev.	Mean	of	Std	Mean	of	Std	N
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		Aggression		Anxiety	Dev.	Depression	Dev.	
Self Esteem	High	95.14	26.72	43.44	9.17	43.87	5.66	163
	Low	98.82	26.77	42.36	8.06	45.48	5.59	537
	Total	97.96	25.82	42.62	8.34	45.11	5.65	700

Table 1 above shows that participants with low self-esteem indicated increased levels of aggression as shown in their mean score ($M = 98.82$, $SD = 26.7$) as opposed to their counterparts with high self-esteem ($M = 95.14$, $SD = 26.72$). In terms of anxiety, however, participants with high self-esteem indicated higher mean score ($M = 43.87$, $SD = 9.17$) than their counterparts with low self-esteem ($M = 42.36$). For depression, participants with low self-esteem showed higher mean score ($M = 45.48$) than those with high self-esteem ($M = 43.87$).

Table 2: Summary of Analysis of Variance (ANOVA) on the influence of the factor self-esteem on the dependent variables: aggression, anxiety and depression.

Effect		Value	Hypothesis	Error df	F	Sig
Self-esteem	Wilk's Lambda	.96	3.00	690.00	8.04	.000

$P < .05$

Result in table 2 above indicate an overall main effect of self-esteem on aggression, anxiety and depression ($F(1, 700) = 8.04$, $P < .05$; Wilks' $\lambda = .96$).

To examine the discrete effect of self-esteem on aggression, anxiety and depression, an ANOVA test of between subject effects was carried out and is shown in table 3 below:

Table 3: Summary of One Way Analysis of Variance (ANOVA): Tests of between subject effects

Source	Dependent variable	Sum squares	of Df	Mean square	F	Sig	Partial eta
Self-esteem	Aggression	6624.52	1	6624.52	11.01	.001	.016
	Anxiety	148.25	1	148.25	2.17	.141	.002
	Depression	559.09	1	559.09	19.06	.000	.027
Error	Aggression	416594.88	692	602.02			

	Anxiety	47189.26	692	68.19
	Depression	20302.55	692	29.34
Total	Aggression	7182839.00	700	
	Anxiety	1319727.00	700	
	Depression	1446468.00	700	

$P < .05$

Results indicate that there is a statistically significant difference between students with low self-esteem and those with high self-esteem in terms of aggression ($F = 11.01$, $p = .001$). Students with low self-esteem showed higher degree of aggression ($M = 98.82$) than those with high self-esteem ($M = 95.14$). There was no statistically significant difference between high and low esteem students in terms of anxiety ($F = 2.17$, $p = .141$). In contrast, there was a statistically significant difference between university youths with high self-esteem and those with low self-esteem as it concerns depression ($F = 19.06$, $p = .000$). University youths living with low self-esteem have higher mean score ($M = 45.48$) in depression than those living with high self-esteem (43.87).

Discussion

This study investigated the nexus between self-esteem and psychological distress among undergraduate youths in South Eastern Nigeria, focusing specifically on aggression, anxiety, and depression. Consistent with theoretical expectations and prior empirical research, findings revealed that students with low self-esteem exhibited significantly higher levels of aggression and depression than those with high self-esteem, while the difference in anxiety levels was not statistically significant. These results support two of the three hypotheses and affirm the continuing relevance of self-esteem as a psychological buffer against certain forms of emotional and behavioural distress.

The finding that students with low self-esteem reported greater aggression corroborates several earlier investigations linking self-esteem deficits to externalized hostility (Baumeister, Campbell, Krueger, & Vohs, 2003; Donnellan *et al.*, 2005). From the Sociometer Theory perspective, aggression may represent a defensive reaction to perceived threats to social acceptance or self-worth. When individuals perceive rejection or devaluation, they may externalize frustration and hostility as compensatory behaviours to restore perceived self-respect (Leary & Baumeister, 2000). Recent evidence reinforces this pattern. Hu *et al.* (2023) found that low self-esteem predicted increased aggression among Chinese university students, mediated by loneliness and self-control deficits. Similarly, Yildirim and Arslan (2022) reported that self-esteem inversely correlated with both reactive and proactive aggression in adolescent samples across diverse cultural contexts. The present study extends this evidence to Nigerian university youths, suggesting that interventions aimed at enhancing self-esteem and emotion regulation may mitigate aggressive tendencies within campus communities.

Contrary to the second hypothesis, the difference in anxiety levels between high and low self-esteem groups was not significant. Although prior studies have often documented negative associations between self-esteem and anxiety (Orth, Robins, & Widaman, 2012), other research indicates that the relationship may depend on the type of anxiety measured. Trait or social anxiety tends to correlate more strongly with self-esteem than transient state anxiety (Kashdan, Uswatte, Steger, & Julian, 2006).

In the present study, the State–Trait Anxiety Inventory (Form Y-1) measured situational anxiety, which may fluctuate based on immediate environmental stressors (e.g., academic workload, exams, and financial pressure) rather than enduring self-evaluative schemas. Furthermore, Nigerian university environments expose students to multiple structural uncertainties—such as strikes, poor infrastructure, and limited counselling services—which may elevate anxiety levels across the board, thereby minimizing differences attributable to self-esteem. This finding suggests that contextual stressors may override the buffering function of self-esteem in shaping momentary anxiety among students.

Consistent with prior research, students with low self-esteem exhibited significantly higher depressive symptoms than those with high self-esteem. The association between low self-esteem and depression has been repeatedly demonstrated in longitudinal and meta-analytic studies (Sowislo & Orth, 2013; Orth & Robins, 2019).

From the Terror Management Theory (TMT) viewpoint, self-esteem acts as a protective factor that shields individuals from existential anxiety and feelings of worthlessness (Pyszczynski *et al.*, 2004). When self-esteem is low, individuals become more vulnerable to hopelessness, rumination, and depressive affect. Recent findings affirm this mechanism: Li (2024) and Kwok *et al.* (2023) reported that self-esteem mediated the relationship between negative academic experiences and depression among Asian university students. By demonstrating similar patterns in a Nigerian sample, the current study underscores the cross-cultural consistency of self-esteem’s role in depression regulation.

In addition, Nigerian students often face psychosocial pressures—such as financial insecurity, academic uncertainty, and cultural expectations—that may exacerbate depressive symptoms among those with fragile self-worth. These contextual factors reinforce the need for campus-based psychoeducational interventions that promote adaptive self-evaluation, coping skills, and social belonging.

Taken together, these findings lend partial support to the Sociometer and Terror Management perspectives. Both theories posit that self-esteem functions as a psychological buffer that regulates emotional distress arising from perceived rejection or existential threat. The significant effects on aggression and depression, but not on anxiety, suggest that self-esteem’s influence may be more stable and trait-like, influencing chronic emotional dispositions rather than transient affective states.

Moreover, the relatively modest effect sizes ($\eta^2 = .016$ to $.027$) observed in this study are consistent with global literature, indicating that self-esteem interacts with other psychosocial variables—such as social support, self-efficacy, and resilience—in predicting mental health outcomes (Arslan, 2023). This implies that interventions should not only focus on elevating self-esteem but also on strengthening broader adaptive capacities.

The current findings hold particular importance for the Nigerian context. Within collectivist African societies, self-esteem is often intertwined with communal identity and relational value rather than individual autonomy. This cultural orientation may shape how students interpret self-worth and distress (Eze, 2022). For example, low self-esteem in a Nigerian student may stem not only from personal failure but also from perceived inability to meet family or societal expectations. Consequently, interventions designed in Western individualist contexts must be culturally adapted to reflect communal values, spiritual orientation, and socioeconomic realities of Nigerian youths.

Despite its strengths—including a large, multi-institutional sample and use of validated instruments—the study has several limitations. First, its cross-sectional design limits causal

inference; future research should employ longitudinal or experimental designs to track how fluctuations in self-esteem influence changes in distress over time. Second, reliance on self-report measures may have introduced response bias or social desirability effects. Incorporating qualitative methods or observer-rated instruments could enhance validity. Third, while the study focused on trait self-esteem, emerging literature suggests that self-esteem instability (lability) may be a stronger predictor of psychological distress (Kernis, 2005). Future Nigerian studies could incorporate measures of self-esteem variability and resilience to deepen understanding.

Finally, cultural dimensions of self-esteem—such as collective identity, religiosity, and gender role expectations—remain underexplored in African contexts. Comparative research across different geopolitical zones could elucidate regional variations and contribute to the global discourse on self-concept and mental health.

Conclusion and recommendation

This study provides empirical evidence that self-esteem significantly influences psychological distress, particularly aggression and depression, among university youths in South Eastern Nigeria. Although no significant association was observed with anxiety, the results affirm the theoretical postulate that self-esteem functions as a psychological buffer against negative affect and maladaptive behaviour.

By integrating Sociometer and Terror Management theories, the study advances understanding of how self-worth regulates emotional experiences and social functioning. The findings underscore the necessity for holistic interventions in tertiary institutions that target self-concept development alongside academic and social adjustment.

In the broader African context, this research contributes to the growing recognition that promoting self-esteem is not a luxury but a public mental-health priority—vital for nurturing emotionally resilient, socially responsible, and academically successful youth populations. Continued research grounded in culturally sensitive frameworks will be crucial in expanding the psychological literature from non-Western perspectives and strengthening mental-health interventions in Nigeria's higher education system.

The findings highlight the need for self-esteem enhancement programs within Nigerian universities. Clinical and Counseling psychologists should integrate cognitive-behavioral and mindfulness interventions to improve self-worth and reduce depressive symptoms (Akin & Uysal, 2023). Institutions should adopt wellness programs that foster resilience, social belonging, and life skills. Future research should explore self-esteem lability, resilience, and cultural factors influencing psychological distress using longitudinal designs.

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