

Psychosocial Correlates of Moral Disengagement among In-School Adolescents in Ibadan, Nigeria: Evidence from Parenting, Peer Pressure, and Self-Esteem

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Abstract: *Moral disengagement enables adolescents to rationalise transgressive conduct without self-censure, yet its psychosocial correlates remain under-studied in Sub-Saharan African school settings. This cross-sectional study examined parenting, peer pressure, and self-esteem as correlates of moral disengagement among 288 in-school adolescents aged 12–20 years from six secondary schools in Ibadan, Nigeria. Participants completed the Moral Disengagement Scale, Parenting Styles and Dimensions Questionnaire (PSDQ), a 30-item peer-pressure measure, and Rosenberg Self-Esteem Scale. Parenting responses were scored according to the PSDQ's intended authoritative, authoritarian, and permissive subscales. All three parenting scores correlated positively with moral disengagement ($r_s = .22-.39$, $p_s < .001$), as did peer pressure ($r = .19$, $p = .001$), whereas self-esteem was unrelated at the bivariate level. The predictors jointly explained 24.3% of the variance in moral disengagement (adjusted $R^2 = .229$). In the multivariate model, authoritative-labelled ($\beta = .44$), authoritarian-labelled ($\beta = .23$), permissive-labelled ($\beta = -.18$), and self-esteem ($\beta = -.23$) scores made significant unique contributions, whereas peer pressure did not. HC3 robust estimation, 5,000-resample bootstrapping, influence diagnostics, and repeated split-half analyses confirmed the stability of this coefficient pattern. However, exploratory factor analysis failed to recover the intended parenting structure, and confirmatory factor analysis showed poor fit for both the theoretical three-factor model ($CFI = .29$, $RMSEA = .20$) and a one-factor alternative. Thus, although parenting responses were robustly associated with moral disengagement, the specific PSDQ subscale coefficients cannot confidently be interpreted as distinct parenting styles. Findings highlight the importance of culturally validated parenting measures and of examining family, peer, and individual correlates jointly in research on adolescent moral development.*

Keywords: moral disengagement, parenting style, peer pressure, self-esteem, in-school adolescents; Nigeria

INTRODUCTION

Adolescence is an important developmental period for moral functioning, marked by continuing changes in moral cognition, emotion, identity, behaviour, and the social contexts through which moral standards are negotiated and internalised (Malti et al., 2021). Bandura's (1999) theory of moral disengagement describes the socio-cognitive mechanisms, including moral justification, euphemistic labelling, advantageous comparison, displacement and diffusion of responsibility, distortion of consequences, dehumanisation, and attribution of blame, through which individuals reconstrue harmful conduct so that it no longer triggers self-condemnation. Rather than reflecting a deficit in moral knowledge, moral disengagement is best understood as a selective and situational deactivation of self-regulatory processes that otherwise restrain antisocial behaviour (Bandura et al., 1996).

A substantial body of evidence links moral disengagement to some of the most pressing behavioural concerns in adolescent populations. A meta-analysis of 27 independent samples totalling nearly 18,000 children and adolescents found a robust positive association between moral disengagement and aggressive behaviour ($r = .28$), with stronger effects among adolescents than younger children (Gini et al., 2014). More recent meta-analytic evidence has broadened this picture, identifying moral disengagement as embedded within a constellation of personal and environmental influences, including individual characteristics and family and peer processes (Luo & Bussey, 2023). Moral disengagement has similarly been implicated in bullying and cyberbullying, delinquency, and diminished prosocial responding (Hardy et al., 2015). In Nigeria, where secondary schools continue to contend with examination malpractice, bullying, cultism, and truancy, understanding the psychosocial factors associated with adolescents' moral disengagement is relevant to school counselling and preventive intervention.

Three psychosocial factors recur in the literature as plausible correlates of moral disengagement: the parenting climate in which the adolescent is raised, the pressure exerted by the peer group, and the adolescent's own sense of self-worth. Parenting style, the constellation of practices through which parents combine responsiveness and demandingness (Baumrind, 1991), shapes children's internalisation of moral standards from an early age. Baumrind's typology distinguishes authoritative parenting (high warmth, high reasoning-based control), authoritarian parenting (high control, low warmth, reliance on coercion), and permissive parenting (high warmth, low control) as conceptually distinct, largely independent dimensions rather than points on a single continuum (Baumrind, 1991; Robinson et al., 2001). Harsh, coercive, and inconsistent parenting has been linked in meta-analytic work to a wide range of externalising outcomes, including aggression and antisocial conduct (Gershoff, 2002). Related Nigerian evidence indicates that parenting styles and moral disengagement are both associated with attitudes toward cybercrime among university students (Okeke et al., 2024). Peer pressure, meanwhile, becomes an increasingly salient influence across adolescence: susceptibility to peer influence follows a curvilinear developmental trajectory, rising through early adolescence before declining in later adolescence and young adulthood (Steinberg & Monahan, 2007), and adolescents who affiliate with antisocial peer groups show corresponding increases in their own aggressive conduct (Gini et al., 2014). Self-esteem's relationship to

moral disengagement is less settled: findings are inconsistent, with some work finding low self-esteem associated with greater reliance on self-serving justification and other work finding no such association, or finding the relationship moderated by cultural and contextual factors (Diamantopoulou et al., 2008). This mixed evidence, combined with the relative scarcity of Nigerian data on the topic, motivates the present study. Understanding how specific parenting dimensions, peer pressure, and self-esteem jointly and independently relate to moral disengagement among in-school adolescents in a major Nigerian urban centre can inform where school counsellors, parents, and policymakers might most productively direct preventive effort. Although authoritative, authoritarian, and permissive parenting are conceptualised as distinct dimensions within the PSDQ framework (Robinson et al., 2001), evidence from cross-cultural applications indicates that its intended factor structure is not consistently replicated across populations (Olivari et al., 2013). The three dimensions were therefore examined separately in the present study in accordance with the intended PSDQ scoring structure, while their empirical distinctiveness within this sample was evaluated directly.

Theoretical Framework

The study is anchored in Bandura's (1986, 1999) social cognitive theory of moral agency, which conceptualises moral conduct as jointly regulated by internal self-sanctions and the social-cognitive mechanisms that can selectively disengage those sanctions from specific acts. Social cognitive theory further holds that self-regulatory capacity develops through reciprocal interaction between the person, their behaviour, and their environment, a premise that supports examining parenting (a proximal environmental influence), peer pressure (a proximal social influence), and self-esteem (a person-level self-evaluative factor) as an integrated, rather than isolated, set of correlates of moral disengagement. This layering of family, peer, and individual influence is also consistent with Bronfenbrenner's (1979) ecological systems perspective, in which the adolescent's moral development is shaped by the microsystems of family and peer group operating in concert with individual characteristics, rather than by any single influence acting alone.

Parenting Dimensions and Moral Disengagement

Parents who rely on coercive, punitive, or emotionally unavailable practices may provide fewer opportunities for the modelling and reasoning-based discipline through which moral standards are internalised (Gershoff, 2002). Accordingly, authoritarian parenting is theoretically expected to relate positively to moral disengagement, whereas authoritative parenting, characterised by warmth combined with reasoning-based control, is expected to relate negatively to it. Permissive parenting, characterised by limited behavioural regulation and inconsistent boundary-setting, may similarly provide fewer opportunities for the internalisation of moral standards (Baumrind, 1991). Consistent with these expectations, Di Pentima et al. (2023) found authoritative parenting to be negatively associated with moral disengagement, whereas authoritarian and permissive parenting were positively associated with it among young adults. Within Nigeria, related evidence has linked parenting styles and moral disengagement with attitudes toward cybercrime (Okeke et al., 2024), while parenting style has also been associated with antisocial behaviour (Nnadozie et al., 2018). However, both studies involved university undergraduates, leaving considerably less evidence concerning parenting and moral disengagement during adolescence

itself. It was hypothesised that each of the three parenting dimensions would be significantly associated with, and would make a significant unique contribution to, adolescents' moral disengagement.

Peer Pressure and Moral Disengagement

Adolescents spend an increasing proportion of their time with peers, whose norms and expectations may become increasingly influential during this developmental period (Steinberg & Monahan, 2007). Where peer groups endorse or normalise rule-breaking, adolescents may draw upon socially shared justifications that facilitate disengagement from their own moral standards. Longitudinal evidence indicates that peer pressure and moral disengagement are developmentally interconnected, with moral disengagement mediating prospective associations between peer pressure and cyberbullying perpetration (Yang et al., 2022). More recent research similarly indicates that specific moral-disengagement strategies may help explain associations between peer pressure and adolescent cyberaggression (Álvarez-Turrado et al., 2025). Importantly, Nigerian evidence has also linked peer pressure with moral disengagement among secondary-school students (Ojiakor-Umenze et al., 2024). It was therefore hypothesised that peer pressure would be significantly associated with moral disengagement and would make a unique contribution to its prediction after accounting for parenting scores and self-esteem.

Self-Esteem and Moral Disengagement

The evidence linking self-esteem to moral disengagement is mixed. Some accounts suggest that adolescents with low self-esteem morally disengage to protect a fragile self-image or to seek acceptance from a peer group, while other work finds no reliable association, or reports effects that depend on the cultural and relational context in which self-esteem is assessed (Diamantopoulou et al., 2008). Given this inconsistency, no directional hypothesis was advanced; the relationship was examined as an open empirical question, both at the zero-order (bivariate) level and net of the other predictors.

Gender, Age, and Moral Disengagement

Findings on gender and age differences in moral disengagement are similarly inconsistent across the literature, with some studies reporting higher moral disengagement among boys or among younger adolescents and others finding no reliable difference (Gini et al., 2014). These comparisons were examined as supplementary research questions rather than directional hypotheses.

Purpose and Hypotheses

The study examined psychosocial correlates of moral disengagement among in-school adolescents in Ibadan metropolis, Nigeria. Specifically, it tested the following hypotheses:

H1: Authoritative parenting, authoritarian parenting, permissive parenting, peer pressure, and self-esteem are each significantly associated with moral disengagement.

H2: Authoritative parenting, authoritarian parenting, permissive parenting, peer pressure, and self-esteem jointly make a significant contribution to the prediction of moral disengagement.

H3: Authoritative parenting, authoritarian parenting, permissive parenting, peer pressure, and self-esteem each make a significant independent (relative) contribution to the prediction of moral disengagement.

METHOD

Research Design

The study employed a cross-sectional survey design. Because data on predictors and the outcome were collected at a single time point from the same respondents, the design supports inferences about association and relative statistical prediction, but not about causal direction or temporal precedence.

Participants and Sampling

Participants were in-school adolescents drawn from secondary schools in Ibadan metropolis, Oyo State, Nigeria. A multistage sampling procedure was used. First, three of the five Local Government Areas (LGAs) in Ibadan metropolis (Ibadan North, Ibadan North-West, and Ibadan South-East) were selected by simple random sampling. Second, three public and three private secondary schools were randomly selected across the three LGAs (six schools in total). Third, 50 students were selected from each school by simple random sampling, yielding an initial sample of 300. After screening for incomplete responses, 288 questionnaires were retained for analysis (96.0% valid response rate). The final sample comprised 129 males (44.8%) and 159 females (55.2%), aged 12 to 20 years; 55.9% were below 15 years, 41.3% were aged 15 to 17 years, and 2.8% were aged 18 years or older. Most participants were in Senior Secondary 1 (63.2%), identified as Christian (66.0%) or Muslim (31.6%), and came from intact, married-parent households (90.6%).

Measures

Moral Disengagement Scale. Moral disengagement was measured with the 32-item scale developed by Bandura et al. (1996), which assesses eight mechanisms of moral disengagement (moral justification, euphemistic labelling, advantageous comparison, displacement and diffusion of responsibility, distortion of consequences, dehumanisation, and attribution of blame) across educational, familial, community, and peer contexts. Items are rated on a Likert-type scale, with higher summed scores indicating greater moral disengagement. The Moral Disengagement Scale demonstrated good internal consistency in the present sample (Cronbach's $\alpha = .88$).

Parenting Dimensions. Parenting was assessed with the 32-item Parenting Styles and Dimensions Questionnaire (PSDQ; Robinson et al., 2001), scored as three separate subscales following the standard PSDQ-Short Form item allocation: authoritative parenting (15 items), authoritarian parenting (12 items), and permissive parenting (5 items). Robinson et al. (2001) reported subscale reliabilities of $\alpha = .86$ (authoritative), $.82$ (authoritarian), and $.64$ (permissive); in the present sample, internal consistency was Cronbach's $\alpha = .80$ (authoritative), $.64$ (authoritarian), and $.68$ (permissive), broadly consistent with the lower reliability of the permissive subscale reported across cultures and samples in Olivari et al.'s (2013) review of the instrument.

Perceived Peer Pressure Scale. Peer pressure was assessed using the 30-item Perceived Peer Pressure Scale (PPPS; Palani & Mani, 2016), developed to assess perceived peer pressure among higher-secondary students. The scale comprises three dimensions: Yielding to Peer Pressure, Resistance to Peer Pressure, and Peers' Encouragement. Items are rated on a five-point Likert-type scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Palani and Mani (2016) reported high internal consistency for the original 30-item scale (Cronbach's $\alpha = .94$). In the present sample, the total scale similarly demonstrated high internal consistency (Cronbach's $\alpha = .91$). The total score was used in the present analyses.

Self-Esteem. Self-esteem was measured with the 10-item Rosenberg Self-Esteem Scale (Rosenberg, 1965), rated from Strongly Disagree to Strongly Agree, with higher scores indicating higher self-esteem. Rosenberg (1965) reported a Cronbach's $\alpha = .95$; the present sample yielded $\alpha = .77$, which is within the acceptable range typically reported for the scale outside its original validation sample.

Procedure

Ethical approval for the study was obtained from the University of Ibadan Social Sciences and Humanities Research Ethics Committee (UI/SSHREC) prior to data collection. Permission to conduct the study was subsequently obtained from the relevant school authorities. Following school approval, eligible students were informed about the purpose and procedures of the study, the voluntary nature of participation, confidentiality of their responses, and their right to withdraw without penalty. For participants younger than 18 years, informed consent forms were provided to take home to their parents or legal guardians and only students who returned signed parental consent forms were enrolled in the study. These adolescents also provided assent before completing the questionnaire. Participants aged 18 years and above provided their own informed consent. Questionnaires were administered in the school setting with the assistance of trained research assistants, and participants completed them independently. Completed questionnaires were collected immediately after administration and handled confidentially. Of the 300 questionnaires administered, 288 contained sufficiently complete data for analysis, yielding a response rate of 96.0%.

Data Analysis

Data were screened for completeness and distributional characteristics before analysis. Skewness and kurtosis values for the study variables were within ± 1 , supporting the use of parametric procedures. Because some preliminary findings were contrary to theoretical expectations, all four measures were reconstructed from the raw item-level data and subjected to systematic item diagnostics. Corrected item-rest correlations were examined for all 104 items, and each item was individually reverse-scored and re-evaluated to determine whether reversal improved its association with the remainder of its scale. Internal consistency was assessed using Cronbach's alpha (α) and McDonald's omega (ω), the latter derived from single-factor confirmatory models.

The structural validity of the 32-item Parenting Styles and Dimensions Questionnaire (PSDQ) was examined because of the substantial intercorrelations among its intended subscales. Exploratory factor analysis (EFA) was conducted using principal axis factoring with promax rotation, with sampling adequacy evaluated using the Kaiser-Meyer-Olkin measure and Bartlett's test of sphericity. Confirmatory

factor analysis (CFA) was conducted using semopy (Version 2.3.11) in Python, with maximum likelihood estimation. The intended correlated three-factor PSDQ model comprising authoritative, authoritarian, and permissive parenting was compared with a one-factor alternative. Model fit was evaluated using the chi-square statistic, comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA), and goodness-of-fit index (GFI).

Pearson product-moment correlations were used to examine bivariate associations among the study variables. Multiple linear regression assessed the joint and unique statistical contributions of the three conventionally scored parenting subscales, peer pressure, and self-esteem to moral disengagement. Multicollinearity was evaluated using variance inflation factors, tolerance statistics, condition indices, and variance-decomposition proportions, while potentially influential observations were assessed using Cook's distance, leverage, and studentised residuals. Given the substantial overlap among the parenting subscales and the possibility of suppression effects, regression coefficients were interpreted alongside their corresponding zero-order correlations.

Robustness of the regression findings was evaluated by re-estimating the model using HC3 heteroskedasticity-consistent standard errors and percentile bootstrap confidence intervals based on 5,000 resamples. Additional sensitivity analyses involved re-estimation after excluding the most influential observations and assessment of coefficient stability across 200 random split-half samples. Gender differences in moral disengagement were examined using an independent-samples t test, whereas age-group differences were evaluated using one-way analysis of variance (ANOVA). Statistical significance was evaluated using two-tailed tests at $p < .05$, with 95% confidence intervals reported where appropriate.

RESULTS

Table 1
Demographic Characteristics of Participants

Variable	Category	n	%
Gender	Male	129	44.8%
	Female	159	55.2%
Age	Below 15 years	161	55.9%
	15-17 years	119	41.3%
	18 years and above	8	2.8%
Class	JS1	14	4.9%
	JS3	74	25.7%
	SS1	182	63.2%
	SS2	18	6.3%

Religion	Islam	91	31.6%
	Christianity	190	66%
	Traditional	7	2.4%
Parents' marital status	Married and intact	261	90.6%
	Married, living apart	17	5.9%
	Widow/widower	6	2.1%
	Single parent	4	1.4%
	Total	288	100%

Note. $N = 288$.

Descriptive Statistics and Reliability

Table 2 presents means, standard deviations, and internal consistency reliabilities for the study variables. Both Cronbach's alpha and McDonald's omega are reported; the two indices converge closely for most scales but diverge for authoritarian parenting, which is discussed below.

Table 2

Descriptive Statistics and Internal Consistency Estimates

Variable	k items	M	SD	α	ω
Moral Disengagement	32	50.01	15.51	.88	.88
Authoritative Parenting	15	38.8	10.27	.80	.77
Authoritarian Parenting	12	29.64	7.08	.64	.51
Permissive Parenting	5	12.93	4.52	.68	.70
Peer Pressure	30	85.64	17.21	.91	.87
Self-Esteem	10	25.93	7.12	.77	.77

Note. $N = 288$. α = Cronbach's alpha; ω = McDonald's omega estimated from single-factor confirmatory models.

Item-Level Diagnostics and Scoring Verification

Given the unexpected direction of some associations, item-level diagnostics were conducted to exclude scoring error as an explanation. Corrected item-rest correlations were examined across all 104 items, and a systematic reverse-coding check tested whether reversing any individual item improved its association with the remainder of its scale. No item showed improved performance following reversal, and internal consistency was highest under the coding scheme as administered. The comparatively weak peer-pressure items were also examined separately; reversing these items reduced Cronbach's α from .91 to .86.

Collectively, these analyses provided no evidence that reverse-coding error accounted for the unexpected findings.

Factor Structure of the Parenting Measure

Given the very high intercorrelations among the three parenting subscales reported in Table 3 below, the factor structure of the 32-item parenting measure was examined directly, rather than assumed. Sampling adequacy was marginal (Kaiser-Meyer-Olkin measure = .586, below the conventional .60 threshold for good adequacy) and Bartlett's test of sphericity was significant, chi-squared (496) = 7762.31, $p < .001$, confirming shared variance among items but signalling a weak basis for stable factor extraction. An exploratory factor analysis (principal axis extraction, promax rotation, three factors specified) did not recover the theoretical authoritative, authoritarian, and permissive structure: the extracted factors mixed items from all three a priori subscales, with the largest factor combining a majority of authoritative items with several authoritarian and permissive items, and the three factors together accounted for only 47.9% of total item variance.

A confirmatory factor analysis of the theoretical three-factor model (authoritative, authoritarian, and permissive parenting as correlated but distinct latent factors, each indicated by its designated items) fit the data poorly: chi-squared(461) = 5850.41, $p < .001$, CFI = .29, TLI = .24, RMSEA = .20, GFI = .28. For comparison, a one-factor model, in which all 32 items loaded on a single general parenting factor, fit no better, chi-squared(464) = 5923.95, $p < .001$, CFI = .28, TLI = .23, RMSEA = .20, ruling out simple unidimensionality as an alternative explanation. Standardised factor loadings in the three-factor model were highly uneven within each subscale: several items loaded strongly (for example, C25 = .91 on authoritative, C23 = .81 on authoritarian, C20 = .83 on permissive), while others loaded near zero (for example, C10 = .01 and C4 = .11 on authoritarian, C1 = .09 on authoritative), which explains the low omega for the authoritarian subscale reported in Table 2.

Taken together, these results indicate that the 32-item parenting measure does not have the discriminant validity, or even the basic model fit, that its intended three-factor structure requires in this sample, regardless of whether it is scored as three subscales or as one composite. This finding does not indicate a coding error (the item-level checks above rule that out) and does not undermine the statistical robustness of the regression results that follow (see Robustness Checks below); rather, it means that the substantive labels "authoritative," "authoritarian," and "permissive" should be treated cautiously when interpreting what those regression coefficients represent, a point developed further in the Discussion.

Bivariate Relationships (Hypothesis 1)

Table 3 presents the intercorrelations among study variables. All three parenting dimensions correlated significantly and positively with moral disengagement: authoritative parenting, $r(286) = .39$, $p < .001$; authoritarian parenting, $r(286) = .39$, $p < .001$; and permissive parenting, $r(286) = .22$, $p < .001$. Peer pressure also correlated significantly with moral disengagement, $r(286) = .19$, $p = .001$. Self-esteem showed a negligible and non-significant correlation with moral disengagement, $r(286) = .01$, $p = .896$.

Hypothesis 1 was therefore supported for the three parenting dimensions and for peer pressure, but not for self-esteem.

A striking feature of Table 3 is the magnitude of the intercorrelations among the three parenting subscales themselves: authoritative and authoritarian parenting correlated at $r = .78$, authoritative and permissive parenting at $r = .79$, and authoritarian and permissive parenting at $r = .65$. These high intercorrelations raise concerns about the empirical distinctiveness of the PSDQ subscales, which are intended to represent distinguishable parenting dimensions (Olivari et al., 2013; Robinson et al., 2001). This pattern is addressed directly in the Discussion, as it bears on how the regression results (below) should be interpreted.

Table 3

Intercorrelations among Study Variables

Variable	1	2	3	4	5
1. Moral Disengagement	-				
2. Authoritative	.393**	-			
3. Authoritarian	.394**	.775**	-		
4. Permissive	.217**	.789**	.654**	-	
5. Peer Pressure	.192**	.227**	.404**	.218**	-
6. Self-Esteem	.008	.484**	.443**	.555**	.219**

Note. $N = 288$. ** $p < .01$.

Joint Contribution of Predictors (Hypothesis 2)

A standard multiple regression was conducted with moral disengagement regressed on authoritative parenting, authoritarian parenting, permissive parenting, peer pressure, and self-esteem simultaneously. The overall model was significant, $R = .49$, $R\text{-squared} = .243$, adjusted $R\text{-squared} = .229$, $F(5, 282) = 18.09$, $p < .001$, indicating that the five predictors jointly explained 24.3% of the variance (adjusted $R^2 = 22.9\%$) in moral disengagement scores. Hypothesis 2 was supported.

Relative Contribution of Predictors (Hypothesis 3)

Table 4 presents the regression coefficients. Authoritative parenting emerged as the strongest predictor ($\beta = .44$, $p < .001$), followed by self-esteem ($\beta = -.23$, $p < .001$), authoritarian parenting ($\beta = .23$, $p = .009$), and permissive parenting ($\beta = -.18$, $p = .050$). Peer pressure did not make a significant unique contribution once the other predictors were controlled ($\beta = .09$, $p = .133$).

Table 4*Multiple Regression Predicting Moral Disengagement*

Predictor	B	SE B	β	t	p
(Constant)	23.10	4.87	-	4.75	< .001
Authoritative	.67	.15	.44	4.32	< .001
Authoritarian	.51	.19	.23	2.63	.009
Permissive	-.60	.31	-.18	-1.97	.050
Peer Pressure	.08	.05	.09	1.51	.133
Self-Esteem	-.50	.14	-.23	-3.68	< .001

Note. $N = 288$. Dependent variable: Moral Disengagement. R -squared = .243, Adjusted R -squared = .229. Variance inflation factors ranged from 1.23 (Peer Pressure) to 3.92 (Authoritative), all below the conventional threshold of 5, indicating that coefficients are interpretable despite the high subscale intercorrelations noted above.

Two features of this regression pattern warrant close comment. First, self-esteem's zero-order correlation with moral disengagement was essentially zero ($r = .01$), yet its standardised regression coefficient was significant and negative once the parenting dimensions and peer pressure were controlled. This divergence between a negligible bivariate association and a significant negative regression coefficient is consistent with statistical suppression. Self-esteem correlated moderately with the three parenting scores (r s = .44–.56), and accounting for this shared variance revealed a negative conditional association between self-esteem and moral disengagement that was not apparent at the zero-order level. Second, a comparable pattern of sign reversal appeared for permissive parenting, whose bivariate correlation with moral disengagement was significantly positive ($r = .22$) but whose regression coefficient was significant and negative. Because permissive parenting is very highly correlated with both authoritative parenting ($r = .79$) and authoritarian parenting ($r = .65$), its zero-order positive association with moral disengagement appears to be carried almost entirely by its overlap with the other two parenting dimensions, and its small unique (net) association runs in the opposite direction. Together with the very high subscale intercorrelations and the CFA misfit reported above, this pattern suggests that the three parenting dimensions are not functioning as clearly separable constructs in this sample, and the individual regression weights for the parenting dimensions should be interpreted with corresponding caution (see Discussion and Limitations).

Robustness Checks

Because the parenting findings are contrary to theoretical expectations and involve two sign reversals (self-esteem and permissive parenting), the regression was re-examined with a battery of diagnostics before accepting the pattern as substantive. Results are summarised narratively here; full diagnostic output is available from the corresponding author on request.

Collinearity diagnostics. Beyond the variance inflation factors already reported (all below 4), a full eigenvalue and variance-decomposition analysis of the predictor matrix was conducted. The largest condition index was 23.9, below the conventional threshold of 30 used to flag concerning collinearity (Belsley et al., 1980), and no single dimension showed simultaneously high variance-decomposition proportions for two or more predictors alongside a high condition index. This indicates that, despite the high raw correlations among the parenting subscales, collinearity in the five-predictor regression itself is moderate rather than severe.

Heteroscedasticity-robust and bootstrap estimation. The regression was re-estimated with HC3 heteroscedasticity-consistent standard errors; the pattern of significance was essentially unchanged (authoritative, $p < .001$; authoritarian, $p = .019$; permissive, $p = .046$; peer pressure, $p = .186$; self-esteem, $p = .001$). A percentile bootstrap with 5,000 resamples produced 95% confidence intervals that excluded zero for authoritative parenting [0.38, 0.97], authoritarian parenting [0.09, 0.93], permissive parenting [-1.22, -0.08], and self-esteem [-0.78, -0.20], and that included zero for peer pressure [-0.03, 0.19], consistent with the original OLS results. The bootstrapped R-squared 95% confidence interval was [.17, .34].

Influence diagnostics. Cook's distance, leverage values, and studentised residuals were examined for all 288 cases to identify potentially influential observations. No case approached the conventional concern threshold of Cook's distance greater than 1 (maximum observed value = 0.019), and no case had a studentised residual exceeding 3 in absolute value, indicating no single adolescent's responses were unduly driving the model. As a sensitivity check, the pattern of results was largely unchanged and, if anything, strengthened (R^2 increased from .243 to .300), with peer pressure additionally reaching statistical significance ($p = .025$).

Stability under resampling. The sample was randomly split in half 200 times, with the regression re-estimated on each half. The sign of each coefficient was consistent with the full-sample result in the large majority of resamples (authoritative parenting positive in 100% of splits, authoritarian parenting positive in 98%, permissive parenting negative in 99%, self-esteem negative in 99.5%, peer pressure positive but non-significant in most of the 91.5% of splits where it was positive), indicating the regression pattern is not an artefact of a particular sample partition.

Collectively, these checks indicate that the theoretically unexpected parenting findings and the two suppression effects are statistically robust: they do not depend on a handful of influential cases, they hold under heteroscedasticity-robust and bootstrap estimation, and they replicate consistently across random subsamples. What robustness checks cannot resolve, however, is the construct-validity problem identified in the CFA above; a statistically stable coefficient attached to a subscale that does not cleanly measure its intended construct is still a stable coefficient, but its substantive interpretation remains constrained accordingly.

Gender Differences

An independent-samples t-test compared moral disengagement scores of male and female adolescents. Male participants ($M = 51.80$, $SD = 15.61$) scored numerically higher than female participants ($M = 48.57$, $SD = 15.32$), but the difference was not statistically significant, $t(286) = 1.77$, $p = .079$.

Table 5

Gender Differences in Moral Disengagement

Gender	N	M	SD	df	T	p
Male	129	51.80	15.61	286	1.77	.079
Female	159	48.57	15.32			

Note. Levene's test supported the assumption of equal variances.

Age- Group Differences

A one-way ANOVA compared moral disengagement scores across the three age groups (below 15 years, 15 to 17 years, 18 years and above). There was no statistically significant difference, $F(2, 285) = 1.76$, $p = .174$.

Table 6

Age-Group Differences in Moral Disengagement

Source	SS	df	MS	F	p
Between Groups	843.07	2	421.54	1.76	.174
Within Groups	68188.88	285	239.26		
Total	69031.94	287			

DISCUSSION

This study examined three parenting dimensions (authoritative, authoritarian, and permissive), peer pressure, and self-esteem as correlates of moral disengagement among in-school adolescents in Ibadan metropolis, Nigeria. Four findings merit discussion: the overall importance of parenting relative to peer pressure, the theoretically unexpected positive association of authoritative parenting with moral disengagement, the suppression pattern observed for self-esteem and for permissive parenting, and the very high intercorrelation among the three parenting subscales, which raises a measurement concern that qualifies all of the parenting-related findings.

Consistent with hypotheses, authoritarian parenting correlated positively with moral disengagement at both the bivariate and multivariate levels, in line with literature linking harsh, inconsistent, or coercive parenting with poorer behavioural and self-regulatory outcomes (Gershoff, 2002). Related Nigerian evidence has linked parenting styles and moral disengagement with attitudes toward cybercrime (Okeke et al., 2024), while parenting style has also been associated with antisocial behaviour among Nigerian

undergraduates (Nnadozie et al., 2018). Permissive parenting also correlated positively with moral disengagement at the bivariate level, consistent with theoretical expectations that an absence of consistent limits leaves fewer opportunities for the internalisation of moral standards (Baumrind, 1991).

The more difficult result to reconcile with theory is authoritative parenting, which correlated positively with moral disengagement, both at the bivariate level ($r = .39$) and in the regression model ($\beta = .44$), at a magnitude equal to or exceeding that of authoritarian parenting. Baumrind's (1991) framework predicts the opposite, and contemporary empirical evidence has similarly associated authoritative parenting with lower moral disengagement and authoritarian and permissive parenting with higher moral disengagement (Di Pentima et al., 2023). Two explanations are worth considering. The first is substantive: in some collectivist and high-control cultural settings, items intended to capture authoritative reasoning and warmth may be endorsed by adolescents alongside authoritarian items because, in practice, Nigerian parents combine firm behavioural control with warmth in ways that do not map cleanly onto a Western authoritative-versus-authoritarian distinction, so that what the scale captures in this context may be better described as general parental involvement or control intensity than as a protective authoritative style specifically. The second explanation is psychometric, and is addressed directly below.

Although cultural differences in parenting remain a possible explanation, the empirical evidence generated in the present study provides considerably stronger support for a psychometric interpretation. Before accepting either the theoretically unexpected authoritative parenting finding or the two sign reversals (self-esteem and permissive parenting) as genuine, three checks were run. First, a full item-level reverse-coding sweep across all 104 items in the four instruments found not a single item whose reversal would improve internal consistency, ruling out a scoring error as the explanation. Second, a battery of regression robustness checks, HC3 robust standard errors, 5,000-resample bootstrap confidence intervals, collinearity diagnostics, case-influence diagnostics, and 200-repetition split-half resampling, confirmed that the coefficient pattern is statistically stable and is not being driven by a handful of influential cases or a particular sample partition (see Robustness Checks in the Results). Third, and most diagnostically, a confirmatory factor analysis of the a priori three-factor PSDQ structure fit the data poorly, $\chi^2(461) = 5850.41$, $p < .001$, CFI = .29, RMSEA = .20, and a one-factor alternative fit no better, ruling out simple unidimensionality as a fix. Standardised loadings within the three-factor model were highly uneven, with several items loading near zero on their assigned subscale, particularly within authoritarian parenting, whose omega reliability (.51) was correspondingly poor despite an acceptable α (.64). Together, these results indicate that the instrument itself, as administered in this sample, does not cleanly separate authoritative, authoritarian, and permissive parenting into the distinct constructs Baumrind's (1991) theory and Robinson et al.'s (2001) instrument assume, a pattern also flagged as a recurring risk of the PSDQ across cultural contexts by Olivari et al. (2013). The variable performance of the PSDQ across cultural settings reinforces the importance of establishing structural validity rather than assuming measurement equivalence when the instrument is transferred across populations (Olivari et al., 2013; Oliveira et al., 2018). The regression coefficients for the three parenting subscales are therefore statistically robust but constrained in what they can be taken to mean. The data provide consistent evidence that responses to the parenting measure are associated with moral disengagement in this sample; however,

which specific parenting dimension accounts for these associations is a question the instrument, in this sample, is not well positioned to answer. These findings add to evidence that parenting measures developed and validated predominantly in Western contexts may require careful cultural and psychometric validation before their intended dimensional structures are assumed to apply to African adolescent populations.

Perceived peer pressure was significantly associated with moral disengagement at the bivariate level but did not retain a significant unique contribution once the parenting dimensions and self-esteem were controlled. This pattern is plausible in light of developmental evidence that peer influence operates alongside, rather than independently of, family socialisation (Steinberg & Monahan, 2007); adolescents whose parenting environment already models coercive or inconsistent standards may be simultaneously more susceptible to peer pressure and more prone to moral disengagement, such that peer pressure's bivariate association with the outcome is substantially carried through its overlap with parenting ($r = .23$ to $.40$ with the three parenting dimensions in the present data). This finding should nevertheless be interpreted in light of the multidimensional composition of the PPPS total score, which combines yielding, resistance, and peer encouragement rather than representing susceptibility to peer influence alone.

Self-esteem was not significantly associated with moral disengagement at the bivariate level but became a significant negative predictor in the multivariate model. This pattern is consistent with a suppression effect, whereby controlling for variance shared with the parenting scores and peer pressure reveals an association that is not evident in the zero-order correlation. Statistically, this suggests that a negative conditional association between self-esteem and moral disengagement becomes apparent only after variance shared with the parenting scores and peer pressure is controlled. Given the cross-sectional design, however, this finding should not be interpreted as evidence that self-esteem is independently protective against moral disengagement. The result therefore warrants cautious interpretation and independent replication, particularly using longitudinal designs capable of clarifying the temporal relationships among self-esteem, family context, peer influences, and moral disengagement.

Neither gender nor age group differentiated moral disengagement scores in this sample. The absence of a gender difference is consistent with the view that moral disengagement, unlike some of its behavioural correlates such as physical aggression, may be less strongly sex-typed than the specific antisocial behaviours it is thought to enable (Gini et al., 2014). The absence of an age-group difference should be interpreted cautiously because only eight participants were aged 18 years or older, resulting in a markedly unbalanced comparison and limited statistical power for detecting differences involving the oldest group.

Theoretical and Practical Implications

These findings support social cognitive theory's emphasis on the reciprocal, layered nature of moral self-regulation: no single factor examined here fully accounted for adolescents' moral disengagement, and the two clearest findings (the self-esteem suppression pattern and the unexpectedly strong role of parenting overall) both illustrate why family, peer, and individual influences need to be modelled jointly rather than in isolation. Practically, the results point toward parenting-focused intervention, such as parent training in

consistent, non-coercive discipline and psychoeducation on the link between parenting practices and adolescent moral reasoning, as a potentially higher-leverage target than peer-focused intervention alone, while suggesting that interventions addressing self-evaluative processes may be better considered within the broader family and social contexts in which adolescent moral self-regulation develops. Given the discriminant validity concerns raised above, however, any parenting intervention informed by this study should be framed around parenting quality broadly rather than around the specific claim that authoritative parenting is a risk factor, which is contrary to theoretical expectations and is likely a measurement-driven result requiring replication with a psychometrically confirmed instrument before being treated as a substantive finding. Future intervention studies should employ parenting measures whose structural validity has first been confirmed within Nigerian adolescent populations.

Strengths and Limitations

The study has several methodological strengths. It examined family, peer, and individual correlates within a single multivariate framework, undertook item-level and structural evaluation of the principal parenting measure rather than assuming its validity, and subjected unexpected regression findings to multiple robustness analyses, including heteroskedasticity-consistent estimation, bootstrapping, influence diagnostics, and repeated split-half resampling. These procedures increase confidence that the observed coefficient patterns are statistically reproducible within this sample, while simultaneously clarifying the measurement limitations that constrain their substantive interpretation.

Several limitations should be considered when interpreting the findings. First, the cross-sectional design precludes conclusions about temporal ordering or causality. The observed associations should therefore be understood as concurrent statistical relationships rather than evidence that parenting, peer pressure, or self-esteem causes moral disengagement. Longitudinal and experimental research is needed to establish temporal precedence and clarify potential developmental pathways.

Second, the structural validity of the parenting measure represents an important measurement limitation. Confirmatory factor analysis did not support the theoretical three-factor PSDQ structure of authoritative, authoritarian, and permissive parenting ($CFI = .29$, $RMSEA = .20$), while a one-factor alternative fit no better ($CFI = .28$, $RMSEA = .20$). Item-level diagnostics ruled out reverse-coding error, and extensive robustness analyses, including HC3 robust standard errors, bootstrap confidence intervals, influence diagnostics, and split-half resampling, demonstrated that the regression coefficients were statistically stable. Thus, although the positive coefficient associated with the authoritative-labelled score and the sign reversal for the permissive-labelled score are reproducible features of these data, they cannot confidently be interpreted as associations with distinct authoritative or permissive parenting constructs. Future studies should establish the structural validity of the PSDQ in Nigerian adolescent populations before relying on its conventional subscale scores and should consider culturally sensitive adaptation or alternative parenting measures where necessary.

Third, all study variables were assessed through adolescent self-report, creating the possibility of shared-method variance and response biases. Future research would benefit from multi-informant designs

incorporating, where appropriate, parent- or teacher-reported assessments alongside adolescent reports. Generalisability is also limited because participants were recruited from only six schools across three LGAs in Ibadan metropolis. Replication across rural settings, other Nigerian geopolitical zones, and out-of-school adolescent populations would provide a stronger basis for determining the broader applicability of the findings.

Fourth, interpretation of the peer-pressure findings is also constrained by use of the PPPS total score, which combines yielding to peer pressure, resistance to peer pressure, and peer encouragement; future studies should examine these dimensions separately where their scoring structure and psychometric properties permit.

Finally, the suppression patterns involving self-esteem and the permissive-labelled parenting score, although statistically coherent and robust to sensitivity analyses, were observed within a single sample. They should therefore be regarded as findings requiring independent replication rather than established developmental relationships. Future studies should examine these conditional associations in larger and more diverse samples using psychometrically validated parenting measures and, preferably, longitudinal designs capable of clarifying how family, peer, and individual factors jointly relate to changes in moral disengagement across adolescence.

Recommendations and Future Directions

The findings have implications for family- and school-based approaches to adolescent moral development. Parents should be supported through school-based workshops and community psychoeducation to adopt consistent, warm, and reasoning-based disciplinary practices rather than coercive approaches. Given the measurement limitations identified in the present study, however, recommendations should focus on parenting quality broadly rather than on claims that any particular parenting style is protective against moral disengagement.

At the school level, counsellors could incorporate moral-disengagement awareness into guidance and preventive programmes, helping adolescents identify and challenge self-serving cognitive justifications, such as euphemistic labelling, diffusion of responsibility, and attribution of blame, within relevant school contexts including bullying and examination malpractice. Interventions aimed at strengthening self-esteem may also be more appropriately situated within broader programmes that attend to adolescents' family environments, given that the negative conditional association between self-esteem and moral disengagement emerged only after parenting and other psychosocial factors were statistically controlled. Future research should prioritise the psychometric validation of parenting measures within Nigerian adolescent populations before conventional subscale scores are interpreted as distinct parenting constructs. Replication using larger and more diverse samples, including adolescents outside Ibadan metropolis, would strengthen the generalisability of the evidence. Longitudinal designs would also be valuable for establishing temporal ordering and determining how parenting, peer influences, and individual psychological resources jointly relate to changes in moral disengagement across adolescence.

CONCLUSION

Among in-school adolescents in Ibadan metropolis, all three conventionally scored PSDQ parenting subscales and peer pressure were significantly associated with moral disengagement, and the five predictors jointly explained approximately one-quarter of the variance in moral disengagement scores. Associations involving the conventionally scored parenting subscales were prominent, while self-esteem's negative conditional association with moral disengagement emerged only after the other psychosocial variables were statistically controlled. The unexpectedly strong and positive association between authoritative parenting and moral disengagement, together with the very high intercorrelation among the three parenting subscales, points to a discriminant validity concern that tempers confidence in which specific parenting style matters most, even as it does not undermine the broader conclusion that parenting is central to understanding adolescent moral disengagement in this context. Given the cross-sectional design, these findings are best read as identifying promising targets for future longitudinal and psychometric research rather than as establishing causal mechanisms.

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