

Internalizing Problems and Mental Well-Being in Adolescence: Evidence for Compensatory Mediation through Parenting Practices

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doi:<https://doi.org/10.37745/bjpr.2013/vol14n16075>

Published June 14, 2026

Citation: Oyekola A.O., and Victor-Kolaru E. (2026) Internalizing Problems and Mental Well-Being in Adolescence: Evidence for Compensatory Mediation through Parenting Practices, *British Journal of Psychology Research*, 14(1),60-75

Abstract: *Internalizing problems are commonly associated with poorer well-being during adolescence, yet family processes may alter this association. Guided by developmental psychopathology and family systems perspectives, this study examined whether parenting practices function as a compensatory pathway linking internalizing problems and mental well-being. Participants were 444 adolescents (aged 10–18 years; 50.7% female) recruited from public secondary schools. Measures of internalizing problems, parenting practices, and mental well-being were administered. Regression-based path analysis with 5,000 bootstrap resamples was used to estimate indirect effects while controlling for age and class level. Internalizing problems were positively associated with parenting practices ($\beta = .187, p < .001$), and parenting practices were positively associated with mental well-being ($\beta = .594, p < .001$). Although internalizing problems showed a negative direct association with mental well-being ($\beta = -.116, p = .004$), a significant positive indirect association emerged through parenting practices ($\beta = .111, 95\% \text{ CI } [.034, .187]$). Findings are consistent with compensatory mediation, highlighting parenting practices as a potential family-level resource supporting adolescent well-being.*

Keywords: Adolescence; Internalizing problems; Parenting practices; Mental well-being; Compensatory mediation;

INTRODUCTION

Internalizing problems encompassing symptoms of anxiety, depression, and social withdrawal represent among the most prevalent mental health challenges during adolescence and are consistently associated with impairments in psychosocial functioning and reduced mental well-being (Bartels et

al., 2013; Gore et al., 2011). Adolescence constitutes a sensitive developmental window marked by rapid biological changes, heightened emotional reactivity, and increasing demands for autonomy, all of which may amplify vulnerability to internalizing difficulties (Steinberg, 2014). In low- and middle-income country contexts, structural stressors such as economic hardship, educational pressure, and limited access to mental health services further compound these vulnerabilities, making the developmental consequences of internalizing problems particularly pronounced (Omigbodun et al., 2008; Patel et al., 2007).

From a developmental psychopathology perspective, internalizing problems are conceptualized as maladaptive emotional and cognitive regulation patterns that emerge from dynamic transactions between individual vulnerabilities and environmental contexts across development (Cicchetti & Rogosch, 2002). A central tenet of this framework is that developmental outcomes are probabilistic rather than deterministic, and that protective processes within the environment can alter otherwise negative trajectories toward more adaptive functioning (Masten, 2001). Mental well-being, defined as positive emotional, psychological, and social functioning, represents a key indicator of adaptive development that extends beyond the mere absence of psychopathology (Keyes, 2005). Understanding how contextual resources, particularly within the family, interact with internalizing symptoms to shape adolescent well-being is therefore a critical research priority.

Among contextual influences on adolescent development, parenting practices represent one of the most consistently identified and modifiable determinants of mental health outcomes. Parenting practices encompass the behavioural strategies, disciplinary approaches, emotional availability, and relational patterns through which parents' guide adolescents' development (Darling & Steinberg, 1993). Empirical studies from Nigeria and other sub-Saharan African countries suggest that supportive parenting is associated with better emotional adjustment, fewer psychological difficulties, and more positive developmental outcomes among adolescents (Omigbodun et al., 2008; Meinck et al., 2017; Lachman et al., 2016; Cluver et al., 2020). Conversely, harsh or inconsistent parenting has been associated with elevated internalizing symptoms in this population (Okojide et al., 2023).

Attachment theory provides a proximal explanatory mechanism for understanding how parenting practices influence adolescents' internal emotional experiences. Within this framework, parent-child relationships characterized by availability, responsiveness, and emotional support foster adolescents' sense of security and enhance their capacity for emotion regulation, which are critical resources for managing internal distress (Bowlby, 1988; Berlin et al., 2005). Adolescents who perceive their parents as engaged and responsive are more likely to employ adaptive coping strategies that sustain well-being even in the presence of emotional difficulties (Tharner et al., 2012). Complementarily, family systems theory emphasizes that parenting behaviours are not static but dynamically responsive to the needs and behaviours of adolescents within the family unit (Minuchin, 1974; Cox & Paley, 1997). Under this perspective, elevated internalizing symptoms in an adolescent may itself elicit heightened parental engagement as caregivers respond to observed distress signals.

Parenting as a Compensatory Process

A growing body of evidence suggests that parenting practices may function not merely as a stable antecedent but as a dynamic, responsive process in relation to adolescent emotional difficulties. In family systems models, elevated child distress reliably prompts increased parental monitoring, emotional engagement, and behavioural involvement (Cox & Paley, 1997; Repetti et al., 2002). This

reactive pattern has been described as compensatory family process, wherein parents intensify their engagement in response to perceived vulnerability or risk in their child (Luthar & Ciciolla, 2016). In low- and middle-income country contexts, where formal mental health services are scarce and family cohesion is a primary resource, parental responsiveness to adolescent distress may be particularly pronounced (Patel et al., 2007; Omigbodun et al., 2008).

In sub-Saharan Africa, and Nigeria in particular, parenting is embedded within extended kinship structures and shaped by cultural values emphasizing collective responsibility, parental authority, and the centrality of the family in children's welfare (Ekpo & Igbokwe, 2015). Within this context, adolescent distress may activate strong normative parenting responses, effectively buffering the deleterious effects of internalizing symptoms on overall well-being. The present study draws on this theoretical synthesis to propose that parenting practices may function as a compensatory pathway in the relationship between internalizing problems and well-being: higher internalizing symptoms prompt greater overall parenting involvement and regulation practices, which in turn supports adolescent well-being, thereby suppressing what would otherwise be a stronger negative association between emotional distress and functioning.

Gender Considerations

Gender represents an important dimension in adolescent mental health research. Global evidence consistently suggests that girls are more likely to report internalizing problems and lower well-being than boys, attributed in part to differential socialization, heightened interpersonal sensitivity, and gender-specific stressors related to puberty and social expectations (Hankin & Abramson, 2001; Nolen-Hoeksema & Girgus, 1994). However, findings from African contexts are more mixed, and gender disparities commonly documented in high-income countries may not manifest uniformly across sociocultural settings (Omigbodun et al., 2008; Maschi et al., 2008). In the Nigerian context, gender-specific socialization norms, differential parental investment in sons versus daughters, and distinct academic and social pressures may produce unique patterns of parenting perception and well-being across gender groups (Olomukoro & Omiunu, 2011). Examining these patterns within a specific sociocultural context is therefore essential for informing culturally relevant intervention design.

From a developmental psychopathology perspective, the association between internalizing problems and well-being should not be viewed as fixed or inevitable but as contingent upon the operation of contextual risk and protective processes across development (Cicchetti & Rogosch, 2002; Masten, 2001). Family systems theory further suggests that parenting behaviours may be dynamically responsive to adolescents' emotional needs rather than functioning solely as antecedent influences (Cox & Paley, 1997; Minuchin, 1974). Accordingly, parenting practices may operate as a compensatory family process through which the potentially adverse implications of internalizing difficulties for well-being are attenuated. Examining this possibility is particularly important in low- and middle-income contexts where family relationships often constitute the primary source of emotional and practical support for young people. The present study therefore investigated whether parenting practices account for the association between internalizing problems and mental well-being among adolescents in Ibadan, Nigeria.

Study Objectives and Hypotheses

The present study examined the associations among internalizing problems, parenting practices, and mental well-being among adolescents in Ibadan, Nigeria, with specific attention to the indirect role of

parenting practices as a compensatory pathway. Drawing on a developmental psychopathology framework and informed by attachment theory and family systems theory, the following hypotheses were proposed:

- H1. Internalizing problems will be positively associated with parenting practices.
- H2. Parenting practices will be positively associated with adolescent mental well-being.
- H3. Parenting practices will mediate the association between internalizing problems and mental well-being, such that the indirect effect through parenting will be positive and significant (compensatory mediation).
- H4. Gender differences will be observed in internalizing problems, parenting practices, and mental well-being.

Guided by developmental psychopathology, family systems theory, and attachment theory, **Figure 1** presents the conceptual model underlying the hypothesised associations among internalizing problems, parenting practices, and mental well-being. The conceptual model proposes that internalizing problems are associated with parenting practices, which in turn are associated with adolescent mental well-being. Drawing on developmental psychopathology and family systems perspectives, parenting practices are conceptualized as a compensatory family process that may account for the association between emotional distress and well-being outcomes.

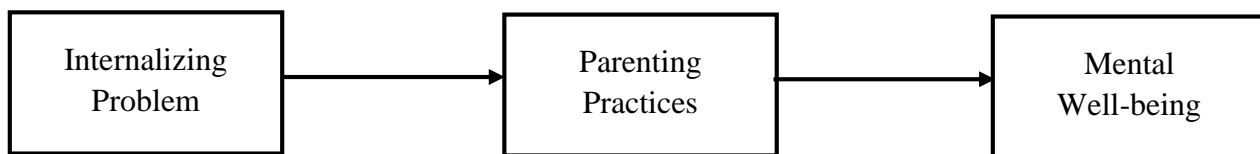


Figure 1. Conceptual model of associations between internalizing problems, parenting practices, and mental well-being.

METHODOLOGY

A cross-sectional survey design was employed. Participants were adolescents recruited from public secondary schools in Ibadan metropolis, Oyo State, Nigeria. A multistage sampling procedure was adopted. First, three Local Government Areas (LGAs) were randomly selected from the eleven LGAs comprising the Ibadan metropolis, enhancing heterogeneity in socioeconomic background and neighbourhood context. Within each LGA, two public secondary schools were randomly selected, yielding six schools in total. Within selected schools, intact classes were approached across all available year groups (JSS 1 to SS 3), and all eligible students present were invited to participate. Public secondary schools were targeted because they enrol the majority of school-going adolescents in Nigeria and offer a context directly relevant to population-level mental health research and policy (Federal Ministry of Education, 2020; Omigbodun et al., 2008).

An initial sample of 450 adolescents was recruited. Participants who reported not having a living mother or father were excluded ($n = 6$), as the parenting measure required ratings of both parental figures, yielding a final analytic sample of $N = 444$. The sample comprised 219 boys (49.3%) and 225 girls (50.7%), aged 10 to 18 years ($M = 13.02$, $SD = 1.19$). Class level distribution was as follows: Year 1, $n = 73$; Year 2, $n = 257$; Year 3, $n = 66$; Year 4, $n = 22$; Year 5, $n = 26$.

Measures

Mental well-being. Mental well-being was assessed using the Mental Health Continuum–Short Form (MHC-SF; Keyes, 2005), a 14-item measure capturing emotional, psychological, and social dimensions of well-being. Respondents rated the frequency of well-being experiences on a six-point scale ranging from 0 (never) to 5 (every day). The MHC-SF has been validated across diverse cultural contexts including sub-Saharan African adolescent populations and demonstrates robust psychometric properties (Keyes et al., 2008; Luijten et al., 2021). In the present sample, internal consistency was excellent ($\alpha = .918$).

Internalizing problems. Internalizing problems were measured using the Revised Child Anxiety and Depression Scale–25 (RCADS-25; Ebesutani et al., 2012), a 25-item self-report instrument assessing core symptoms of anxiety and depression relevant to internalizing psychopathology. Each item is rated on a four-point scale from 0 (never) to 3 (always), with higher total scores indicating greater symptom severity. The RCADS-25 has demonstrated satisfactory psychometric properties across diverse adolescent samples (Chorpita et al., 2015). In the present sample, Cronbach's alpha was .855, indicating good internal consistency.

Parenting practices. Parenting practices were assessed using the Alabama Parenting Questionnaire (APQ; Frick, 1991), a well-established measure of parenting behaviour across five domains: Involvement, Positive Parenting, Poor Monitoring/Supervision, Inconsistent Discipline, and Corporal Punishment. The standard 42-item mother-report version was administered alongside 9 parallel father-report items for shared subscale items, yielding a 51-item version covering both maternal and paternal parenting behaviours. Items are rated on a five-point scale from 0 (never) to 4 (always). A composite parenting practices score was computed by summing all 51 items, reflecting the overall level of parenting activities experienced by adolescents across both maternal and paternal domains. Higher scores therefore reflect greater overall parenting practices across supportive, supervisory, and disciplinary domains. The APQ has been used in Nigerian and other African adolescent studies to assess parenting-related predictors of psychosocial outcomes (Meinck et al., 2017; Lachman et al., 2016; Cluver et al., 2020). The instrument demonstrated strong internal consistency in the present sample ($\alpha = .887$). This composite approach is consistent with family systems conceptualizations in which parenting is experienced holistically by adolescents as an overall family relational environment rather than as discrete maternal or paternal behaviours (Cox & Paley, 1997; Ekpo & Igbokwe, 2015).

Age and class level were included as covariates given their established relevance to developmental stage, school-related demands, and potential confounding of associations among the primary study variables (Steinberg, 2014; Omigbodun et al., 2008).

This study was conducted in full accordance with the ethical standards of the institutional and National research committees, as well as the 1964 Helsinki Declaration and its later amendments. Ethical approval was obtained from the Social Science and Humanities Research Ethics Committee (SSHREC), with approval number UI/SSHREC/2024/0091. Prior to data collection, official permission was secured from the Oyo State Ministry of Education and the principals of the selected schools. Written informed consent was obtained from parents or legal guardians of all participants, and assent was obtained from the adolescents themselves. Participants were assured of the voluntary nature of their involvement, the confidentiality of their responses, and their right to withdraw from the study at any time without consequence. Questionnaires were administered in groups within classrooms

during school hours, with trained research assistants present to clarify instructions. All data collected were kept strictly confidential and used solely for research purposes.

Data were analysed in three stages. First, descriptive statistics (means, standard deviations, and ranges) and Pearson product-moment correlation coefficients were computed to characterize the sample and examine bivariate associations among the study variables. Second, the hypothesised compensatory mediation model was tested using ordinary least squares (OLS) regression-based path analysis. Parenting practices were specified as the mediator linking internalizing problems and mental well-being, while age and class level were included as covariates. Consistent with recommendations for mediation analysis, the direct effect of internalizing problems on mental well-being (c' path), the effect of internalizing problems on parenting practices (a path), and the effect of parenting practices on mental well-being controlling for internalizing problems (b path) were estimated (Hayes, 2018).

The significance of the indirect effect ($a \times b$) was evaluated using bias-corrected bootstrap confidence intervals based on 5,000 resamples. An indirect effect was considered statistically significant when the 95% bootstrap confidence interval did not include zero (Hayes, 2018; Shrout & Bolger, 2002). Standardized regression coefficients (β), standard errors, t -values, p -values, and 95% confidence intervals are reported. Cohen's f^2 effect sizes were calculated to evaluate the magnitude of individual predictors, with values of .02, .15, and .35 interpreted as small, medium, and large effects, respectively (Cohen, 1988).

Finally, independent-samples t -tests were conducted to examine gender differences in internalizing problems, parenting practices, and mental well-being. Cohen's d was calculated as an index of effect size, with values of .20, .50, and .80 indicating small, medium, and large effects, respectively (Cohen, 1988). All analyses were conducted using Python, and statistical significance was evaluated at $\alpha = .05$.

RESULTS

Descriptive Statistics and Bivariate Correlations

Descriptive statistics and Pearson correlation coefficients among study variables are presented in Table 1. Internalizing problems showed good variability across the sample ($M = 25.22$, $SD = 11.96$, range = 0–72). Parenting practices scores ranged from 0 to 204 ($M = 89.50$, $SD = 27.90$), indicating broad variability in perceived overall parenting involvement and regulation practices. Mental well-being scores ranged from 14 to 84 ($M = 54.41$, $SD = 18.74$).

Internalizing problems were positively and significantly correlated with parenting practices ($r = .19$, $p < .001$), indicating that adolescents with higher internalizing symptoms reported greater overall parenting practices across supportive, supervisory, and disciplinary domains. Parenting practices were strongly and positively correlated with mental well-being ($r = .57$, $p < .001$). Notably, internalizing problems showed a near-zero and non-significant bivariate correlation with mental well-being ($r = -.01$, $p = .902$). Age and class level showed weak and non-significant correlations with all primary study variables. The strong correlation between age and class level ($r = .30$, $p < .001$) was expected given their developmental co-variation and was accounted for by including both as covariates.

Table 1: Descriptive Statistics and Correlations among Study Variables

Variable	M	SD	1	2	3	4	5
1. Internalizing problems	25.22	11.96	—				
2. Parenting practices	89.50	27.90	.19**	—			
3. Mental well-being	54.41	18.74	-.01	.57**	—		
4. Age	13.02	1.19	.04	.02	-.00	—	
5. Class level	—	—	-.06	-.03	.01	.30**	—

Note. N = 444. Class level is an ordinal categorical variable; M and SD are not reported. ** $p < .01$.

Regression-Based Path Analysis

The hypothesised path model was estimated with age and class level included as covariates. Standardized path coefficients, standard errors, t-values, p-values, and effect sizes are reported in Table 2. The indirect effect of internalizing problems on mental well-being through parenting practices is presented in Table 3.

Consistent with Hypothesis 1, internalizing problems were positively and significantly associated with parenting practices ($\beta = 0.187$, $SE = 0.047$, $t = 3.98$, $p < .001$, 95% CI [0.095, 0.279], $f^2 = .036$), indicating that higher levels of internalizing symptoms were associated with greater reported overall parenting involvement and regulation practices. Consistent with Hypothesis 2, parenting practices were strongly and positively associated with mental well-being ($\beta = 0.594$, $SE = 0.040$, $t = 15.03$, $p < .001$, 95% CI [0.516, 0.671], $f^2 = .515$), representing a large effect. The direct effect of internalizing problems on mental well-being, controlling for parenting practices, was negative and significant ($\beta = -0.116$, $SE = 0.040$, $t = -2.93$, $p = .004$, 95% CI [-0.194, -0.038], $f^2 = .020$). Covariates were not significantly associated with mental well-being (Age: $\beta = -0.017$, $p = .677$; Class level: $\beta = 0.025$, $p = .539$). The model explained 3.7% of the variance in parenting practices ($R^2 = .037$) and 34.0% of variance in mental well-being ($R^2 = .340$), indicating that the model accounted for a substantial proportion of variance in mental well-being

Consistent with Hypothesis 3, the indirect effect of internalizing problems on mental well-being through parenting practices was positive and statistically significant ($\beta = 0.111$, $SE = 0.038$, 95% BC CI [0.034, 0.187]), with the confidence interval excluding zero. The total effect of internalizing problems on mental well-being was near zero and non-significant ($\beta = -0.005$, $p = .916$). Taken together, these findings indicate that the negative direct association between internalizing problems and mental well-being was offset by a positive indirect association operating through parenting practices. This pattern, in which the direct and indirect effects operate in opposing directions and substantially attenuate the total effect, is consistent with suppressor or compensatory mediation (MacKinnon et al., 2000; Tzelgov & Henik, 1991).

Table 2: Regression-Based Path Coefficients for the Compensatory Mediation Model

Path	β	SE	t	P	95% CI	f ²
Internalizing → Parenting (a)	0.187	0.047	3.98	<.001	[0.095, 0.279]	.036
Parenting → Well-being (b)	0.594	0.040	15.03	<.001	[0.516, 0.671]	.515
Internalizing → Well-being (c')	-0.116	0.040	-2.93	.004	[-0.194, -0.038]	.020
Age → Well-being	-0.017	0.041	-0.42	.677	—	—
Class level → Well-being	0.025	0.041	0.61	.539	—	—

Note. N = 444. Standardized coefficients reported. Confidence intervals are bias-corrected and bootstrapped (5,000 resamples). f² = Cohen's f² effect size: .02 = small, .15 = medium, .35 = large. R² (Parenting) = .037; R² (Well-being) = .340.

Table 3: Indirect Effect of Internalizing Problems on Mental Well-Being through Parenting Practices

Indirect Path	β	SE	95% BC CI
Internalizing → Parenting → Well-being	0.111	0.038	[0.034, 0.187]

Note. BC CI = bias-corrected bootstrap confidence interval based on 5,000 resamples. The indirect effect is positive, consistent with compensatory mediation. The total effect of internalizing problems on well-being was $\beta = -0.005$, $p = .916$.

Figure 2 illustrates the compensatory mediation pattern observed in the data. Internalizing problems were positively associated with parenting practices, which in turn were positively associated with mental well-being. Although internalizing problems exhibited a negative direct association with mental well-being, the positive indirect association through parenting practices operated in the opposite direction, resulting in a near-zero total association. This pattern is consistent with compensatory mediation.

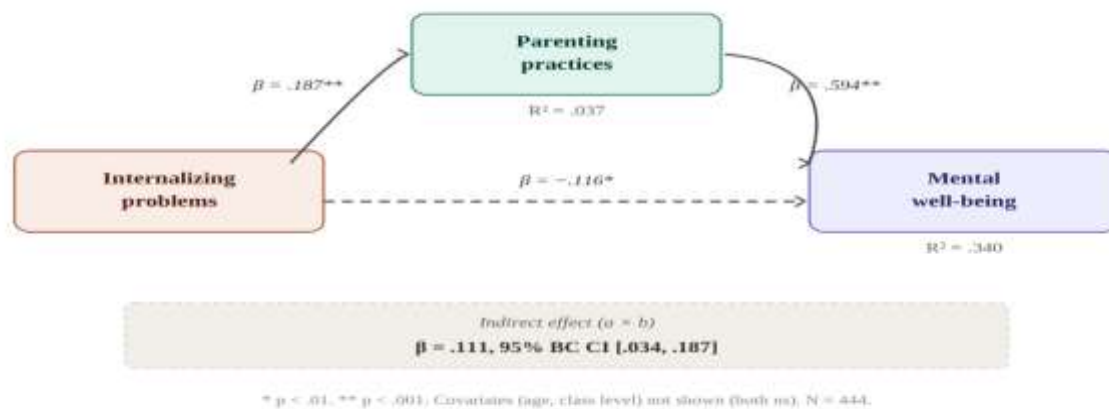


Figure 2. Path model of indirect associations between internalizing problems and mental well-being through parenting practices.

Gender Differences

Results of independent samples t-tests examining gender differences are presented in Table 4. Consistent with Hypothesis 4 in part, no significant gender difference was observed in internalizing problems ($t(442) = 1.21, p = .228, d = .11$). Boys reported significantly higher parenting practices scores than girls ($t(442) = 3.98, p < .001, d = .38$), representing a small-to-medium effect. Boys also reported significantly higher mental well-being than girls ($t(442) = 2.98, p = .003, d = .28$), a small-to-medium effect.

Table 4: Gender Differences in Internalizing Problems, Parenting Practices, and Mental Well-Being

Variable	Boys M	Boys SD	Girls M	Girls SD	t	Df	p	d
Internalizing problems	25.91	12.07	24.54	11.84	1.21	442	.228	.11
Parenting practices	94.75	30.24	84.39	24.42	3.98	442	<.001	.38
Mental well-being	57.07	19.12	51.82	18.02	2.98	442	.003	.28

Note. d = Cohen's d . Boys $n = 219$; Girls $n = 225$.

DISCUSSION

The present study examined the associations among internalizing problems, parenting practices, and mental well-being among adolescents in Ibadan, Nigeria. The findings are most appropriately understood within a developmental psychopathology framework, which emphasizes that developmental outcomes emerge from ongoing transactions between individual vulnerabilities and contextual processes rather than from risk factors operating in isolation (Cicchetti & Rogosch, 2002). Consistent with this perspective, internalizing problems were not uniformly associated with poorer well-being. Instead, the results revealed a compensatory mediation pattern in which internalizing problems were positively associated with parenting practices, and parenting practices were strongly associated with mental well-being. Consequently, the negative direct association between internalizing problems and well-being was substantially offset by a positive indirect association operating through parenting practices. This pattern suggests that family processes may function as developmental compensatory mechanisms that alter the implications of emotional distress for adolescent adjustment and well-being.

Internalizing Problems as an Antecedent of Overall Parenting Activities

The finding that internalizing problems were positively associated with parenting practices ($\beta = 0.187, p < .001$) is among the most substantively important results of the study. This direction of association, whereby higher adolescent internalizing symptoms were associated with greater overall parenting involvement and regulation practices contrasts with the predominant Western literature, which typically frames parenting as an antecedent of internalizing problems (Morris et al., 2007; van der Bruggen et al., 2008). However, it is consistent with family systems theory, which posits that family members' behaviours are mutually regulating and that parental responses are dynamically shaped by the emotional and behavioural signals of children within the family system (Cox & Paley, 1997;

Minuchin, 1974). One interpretation consistent with family systems theory is that adolescent distress may serve as a cue for increased parental attention, monitoring, and behavioural involvement.

The compensatory family process hypothesis finds empirical support in the broader developmental literature. Repetti et al. (2002) documented that parents in high-stress family environments often increase their engagement with distressed children as a regulatory response. Luthar and Cicciolla (2016) similarly found that parental responsiveness tends to escalate in response to child vulnerability within low-resource contexts. In the Nigerian cultural context, where the family is the primary institution of social support and parental responsibility for child welfare is normatively emphasized, this pattern is particularly plausible (Ekpo & Igbokwe, 2015) When adolescents manifest emotional distress, Nigerian parents may respond with heightened oversight, greater involvement, and increased behavioural engagement, consistent with cultural norms that position the family as the first and most legitimate source of care.

This interpretation carries an important cross-sectional caveat: the direction of effect between internalizing problems and parenting cannot be definitively established from the present data. The positive association is equally consistent with the possibility that broader overall parenting involvement and regulation practices encompassing both supportive and directive behaviours elevates some internalizing symptoms through increased parental demand or surveillance. However, the mediation structure in which the indirect pathway is positive and the direct pathway negative statistically supports the interpretation that parenting is operating as a suppressor of the otherwise negative direct effect of internalizing problems on well-being, rather than merely as an independent predictor.

Parenting Practices and Mental Well-Being

The strong positive association between parenting practices and mental well-being ($\beta = 0.594$, $p < .001$, $f^2 = .515$) represents the most robust finding in the study and is consistent with the broader literature linking family process variables to adolescent positive functioning (Okojide et al., 2023; Luijten et al., 2021). This large effect size indicates that parenting practices account for a substantial share of the explained variance in well-being beyond the contributions of internalizing problems and covariates. Attachment theory offers a coherent interpretive account: parental engagement encompassing warmth, monitoring, and responsiveness fosters adolescents' sense of security and perceived support, which are critical regulatory resources for maintaining emotional, psychological, and social well-being (Bowlby, 1988; Berlin et al., 2005; Tharner et al., 2012). Within a developmental psychopathology framework, this finding underscores the role of parenting as a robust protective process that sustains adaptive functioning across varying levels of individual-level risk (Cicchetti & Rogosch, 2002; Masten, 2001).

The composite parenting measure used in the present study captures overall parenting involvement and regulation practices rather than isolating specific dimensions. The strong well-being association therefore reflects the aggregate relational environment experienced by adolescents across maternal and paternal parenting domains, which may be a more ecologically valid representation of how adolescents in Nigerian extended family contexts actually experience parenting as a holistic relational climate rather than as discrete parent-specific behaviours (Cox & Paley, 1997; Ekpo & Igbokwe, 2015).

Compensatory Mediation and the Suppression Effect

The findings represent an example of inconsistent mediation or suppressor mediation, in which the indirect and direct effects operate in opposite directions (MacKinnon et al., 2000). The indirect effect of internalizing problems on well-being through parenting was positive and significant ($\beta = 0.111$, 95% BC CI [0.034, 0.187]), while the direct effect of internalizing problems on well-being was negative and significant ($\beta = -0.116$, $p = .004$), and the total effect was near zero and non-significant ($\beta = -0.005$, $p = .916$). This pattern in which the indirect and direct paths carry opposing signs and approximately cancel is the hallmark of suppressor mediation and has been documented in developmental and clinical psychological research as theoretically meaningful rather than a measurement error (MacKinnon et al., 2000; Shrout & Bolger, 2002).

The substantive interpretation is as follows: in the absence of the parenting pathway, internalizing problems would carry a meaningful negative influence on well-being (as indexed by the significant direct effect). However, internalizing problems simultaneously are associated with greater overall parenting involvement and regulation practices (positive a-path), and this strongly supports well-being (positive b-path). The net result is that internalizing problems carry essentially no total effect on well-being at the bivariate level, because the compensatory family process response functionally absorbs the distress and redirects it toward a well-being-supportive family process. This is a theoretically coherent and practically important finding: it suggests that the Nigerian family system may be functioning as an effective buffer against the well-being consequences of adolescent internalizing symptoms through responsive parental engagement.

Gender Differences

The absence of significant gender differences in internalizing problems ($d = .11$, $p = .228$) is consistent with findings from other Nigerian and sub-Saharan African studies and suggests that the female preponderance in internalizing psychopathology documented in high-income countries may not generalize uniformly across sociocultural contexts (Omigbodun et al., 2008; Maschi et al., 2008). Several explanations have been proposed for the attenuated or absent gender gap in African contexts, including differential socialization toward emotional stoicism in boys, reduced gender-differentiated reporting norms among younger adolescents, and the particular stressors operating in the study context that may affect boys and girls comparably (Nolen-Hoeksema & Girgus, 1994; Omigbodun et al., 2008).

The higher parenting-practices scores reported by boys should be interpreted cautiously because the composite measure captured a broad range of parenting behaviours, including involvement, monitoring, supervision, and disciplinary regulation. Thus, higher scores do not necessarily indicate greater warmth or emotional support. Rather, the finding may reflect gender-differentiated socialization processes in which boys experience more intensive parental regulation, behavioural monitoring, and responsibility-oriented expectations. Research on adolescent gender socialization indicates that adolescence is a period when family expectations around autonomy, responsibility, mobility, and gender-role performance become more pronounced (John et al., 2017). One possible explanation is provided by research on boys' gender socialization, which suggests that boys are often positioned in relation to expectations of responsibility, achievement, toughness, and future provision (Amin et al., 2018). In sub-Saharan African contexts, parental monitoring and communication are central family processes shaping adolescent development (Biddlecom et al., 2009), while Nigerian family systems often place strong emphasis on parental authority, social responsibility, and family role

expectations (Ekpo & Igbokwe, 2015; Akinyemi & Ogunlade, 2019). The gender difference observed in the present study may therefore reflect differences in the intensity and form of parental involvement and regulation rather than preferential treatment or greater emotional nurturance toward boys. This interpretation is consistent with evidence suggesting that gender differences in parenting often reflect differences in behavioural expectations and monitoring practices rather than differential parental affection (Endendijk et al., 2016). Future research should examine these gendered pathways directly.

Boys also reported higher levels of mental well-being than girls, although the effect size was modest ($d = .28$). This finding is broadly consistent with evidence suggesting that adolescent girls may experience greater emotional burden associated with interpersonal stressors, body image concerns, and gender-specific social expectations, which can negatively affect subjective well-being even when internalizing symptom levels do not differ substantially (Hankin & Abramson, 2001; Nolen-Hoeksema & Girgus, 1994). However, given the relatively small effect size observed in the present study, this finding should be interpreted cautiously and warrants further investigation within culturally specific developmental contexts.

IMPLICATIONS

The findings has several important implications for adolescent mental health promotion in Nigeria and comparable low-and middle-income country contexts. First, the finding that parenting practices account for a large proportion of variance in adolescent well-being emphasizes the value of family-focused intervention approaches. School- and community-based parenting programs that support caregivers in sustaining engaged, responsive, and structurally involved parenting particularly with adolescents exhibiting signs of emotional distress may be among the most scalable and cost-effective strategies for promoting well-being in resource-limited settings. The accessibility of public secondary schools makes them a particularly viable delivery platform for such programs (Federal Ministry of Education, 2020).

Second, the compensatory mediation pattern suggests that families in this context may already be mobilizing effective responses to adolescent emotional distress. Interventions need not supplant existing family processes but may instead seek to strengthen and sustain naturally occurring compensatory family process responses, and to address barriers including caregiver mental health, economic stress, and limited knowledge of adolescent development that may erode this capacity over time (Repetti et al., 2002; Luthar & Cicciolla, 2016).

Third, the gender findings suggest that girls may be at heightened risk for diminished well-being partly through lower perceived overall parenting involvement and regulation practices. Gender-sensitive programming that specifically addresses parental involvement with daughters including awareness of culturally specific forms of parental expression that may not be recognized by adolescent girls as supportive may be warranted.

Limitations and Future Directions

Several limitations should be noted. First, the cross-sectional design precludes causal inference. The compensatory mediation interpretation, while theoretically grounded and statistically consistent, cannot be confirmed without longitudinal data in which the temporal ordering of internalizing symptoms, parenting responses, and well-being outcomes can be directly modeled. Future studies

should employ longitudinal or experience-sampling designs to capture the dynamic, transactional nature of the parenting-distress relationship. Second, all measures relied on adolescent self-report, which may be subject to response bias, social desirability, or mood-congruent reporting. Multi-informant designs incorporating parent-reported parenting behaviours would strengthen the validity of findings. Third, the composite parenting measure combines positive and negative parenting dimensions, precluding examination of differential effects across parenting subscales. Future research should disaggregate parenting practices into their constituent dimensions to identify which specific behavioural domains drive the well-being association. Fourth, the sample was drawn exclusively from public secondary schools in Ibadan metropolis, limiting generalizability to adolescents in private schools, rural settings, or other Nigerian regions. Fifth, both attachment security and specific emotion regulation strategies proposed as mechanisms through which parenting affects well-being were not directly assessed. Future studies should include measures of these mediating processes to test more granular theoretical models.

CONCLUSION

This study contributes to developmental psychopathology research by demonstrating that the association between adolescent internalizing problems and mental well-being may be shaped by compensatory family processes. Rather than supporting a simple risk model in which internalizing difficulties are directly linked to poorer functioning, the findings revealed a pattern consistent with compensatory mediation whereby parenting practices were associated with attenuation of the negative association between emotional distress and well-being. These findings reinforce a central proposition of developmental psychopathology; implying that developmental outcomes are not determined solely by individual vulnerabilities but emerge through ongoing interactions between risk and protective processes within the broader developmental context (Cicchetti & Rogosch, 2002; Masten, 2001). In the present context, parenting practices appear to represent an important family-level resource associated with adolescent well-being despite the presence of emotional difficulties. Strengthening and sustaining such family processes may therefore represent a promising strategy for promoting adolescent mental health in Nigeria and other low- and middle-income settings.

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