School Self-Esteem as a Moderator of the Impact of Violent Behaviour among Adolescents on their Psychosocial Well-being in Douala, Cameroon

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ABSTRACT

Adolescence is a pivotal developmental stage characterised by physical, cognitive, and psychosocial changes, during which self-esteem and well-being significantly influence behaviour, including violent tendencies. In Cameroon, adolescent violence is a growing concern, with aggression often linked to poor psychosocial well-being, yet protective factors in school settings remain underexplored. This study investigates the moderating role of school self-esteem in the relationship between psychosocial well-being and violent behaviour among 414 schooling adolescents (aged 13-18 years) in Douala Municipality, Cameroon, using a cross-sectional design with quota sampling to ensure balanced representation across gender, school type (public, denominational, lay private), and socioeconomic status. Participants completed three validated instruments: the Warwick-Edinburgh Mental Well-being Scale (WEMWBS), the school subscale of Coopersmith's Self-Esteem Inventory, and the Adolescent Aggression Scale of Orpinas and Frankowski (2001). Descriptive statistics revealed moderate psychosocial well-being, positive school self-esteem, and right-skewed violent behaviour scores, indicating a subset of high-risk individuals. Regression analyses demonstrated that both psychosocial well-being and school self-esteem independently predicted reduced violent behaviour. Significantly, the interaction term was significant, with simple slopes analysis showing the protective effect of well-being was stronger for adolescents with high self-esteem versus low self-esteem. These findings extend social cognitive theory by demonstrating how school-based self-perceptions amplify the violence-preventive benefits of psychosocial well-being in a Cameroonian context. The results highlight the importance of simultaneously enhancing both psychological well-being and academic self-concept in school-based interventions, while suggesting that institutional climate qualitatively shapes these protective mechanisms. This study provides empirical support for culturally responsive violence prevention strategies in sub-Saharan African educational settings.

Keywords: Adolescence, School Self-Esteem, Psychosocial Well-being, Violent Behaviour, Douala, Cameroon

INTRODUCTION

Adolescence is a critical developmental period characterised by profound physical, cognitive, emotional, and social transformations. During this stage, self-perceptions—particularly school self-esteem (a student's evaluation of their worth and competence in academic settings)—play a pivotal role in shaping well-being and behavioural outcomes ([13], [8]). Recent global studies underscore that school self-esteem, defined as a positive evaluation of one's academic competence and value in educational settings, acts as a protective factor against problem behaviours like aggression, with cross-cultural validity ([27], [23], [42]). Similarly, psychosocial well-being—encompassing emotional regulation, social competence, and life satisfaction—is closely linked to reduced violent behaviour among adolescents [20]. However, the mechanisms underlying these relationships in sub-Saharan African contexts, particularly Cameroon's urban settings like Douala, remain underexplored. Therefore, understanding the interplay between psychosocial well-being, self-esteem, and violent behaviour is a necessity.

Prior research [4] has consistently demonstrated that adolescents' positive self-evaluation of their worth and competence within the school setting, or school self-esteem, can serve as a protective factor against the development of various problem behaviours, such as aggression and violence [11]. Existing literature also

suggests that adolescents' psychosocial well-being, encompassing factors like emotional regulation, social competence, and overall life satisfaction, is closely linked to their behavioural outcomes, including the propensity for violent acts [5]. While the role of school self-esteem as a moderator of the relationship between psychosocial well-being and violent behaviour has been explored in various cultural contexts, its specific mechanisms in the unique sociocultural setting of Douala, Cameroon remain largely understudied ([29] , [6], [12]).

This study investigates the moderating role of school self-esteem in the association between psychosocial well-being and violent behaviour among adolescents in Douala. By integrating ecological and social-cognitive theories, the research aims to elucidate how individual and contextual factors interact to shape behavioural outcomes, informing targeted interventions for Cameroonian youth.

Problem statement

Despite growing evidence linking school self-esteem to reduced violent behaviour among adolescents globally, its protective role remains underexplored in Cameroon's sociocultural context. With rising school violence in Douala—exacerbated by socioeconomic disparities and inadequate support systems—this study examines whether school self-esteem moderates the psychosocial well-being–violence relationship.

Theoretical Framework

The study is grounded in two complementary theories: Bronfenbrenner's Ecological Systems Theory (1) posits that adolescent development is shaped by interactions across multiple systems (school, family, …) ([20], [13]). In Cameroon, where schools often mirror societal inequalities, this framework helps contextualise how macro-level factors (socioeconomic disparities) and micro-level processes (teacher-student dynamics) jointly influence behaviour [23].

Social Cognitive Theory (2) emphasises the role of self-perception and observational learning in [41]. Adolescents with high school self-esteem may internalise positive self-schemas, buffering against violent tendencies even in adverse environments [18] .

Violent behaviour among schooling adolescents

The problem of violence in schools has become a serious concern in many countries, including Cameroon. Research has shown that violence in schools can have a detrimental impact on students' academic performance, psychological well-being, and overall social development[6]. Existing studies suggest that adolescents who engage in violent behaviour are more likely to experience long-term negative consequences, such as academic difficulties, social isolation, and involvement in criminal activities later in life ([6], [16], [29]).

Factors contributing to violent behaviour: Previous studies have identified a range of individual, family, and school-related factors that may contribute to the development of violent behaviour among adolescents [39]. At the individual level, poor emotional regulation, low self-esteem, and negative peer influence have been associated with increased risk of violent behaviour.

Furthermore, researchers have highlighted the significant influence of family dynamics on adolescents' behaviour, with dysfunctional family environments characterised by parental neglect, abuse, and poor supervision being linked to a higher incidence of violent behaviour among adolescents ([29], [6]).

Additionally, the school environment itself can play a crucial role in shaping adolescents' behaviour. According to previous research, a school climate that lacks safety, is characterised by poor teacher-student relationships, and has ineffective disciplinary policies can contribute to the perpetuation of violent behaviour among students ([6], [16], [29]).

The Role of Socioeconomic and Cultural Contexts: Emerging research underscores how broader socioeconomic and cultural factors exacerbate violent behaviour in Cameroonian schools. Poverty and income inequality, prevalent in regions like the Far North and Adamawa, have been linked to heightened aggression

among adolescents, as economic deprivation fosters frustration and reduces access to mental health resources ([28], [30]). Cultural norms, such as the glorification of masculinity and corporal punishment as discipline, further normalise violence [3]. For instance, a study in Yaoundé found that 62% of students perceived physical discipline as acceptable, perpetuating cycles of aggression [30]. Additionally, community exposure to conflict, such as Boko Haram insurgencies in the Anglophone regions, has been associated with desensitisation to violence and its replication in schools [38]. These contextual factors interact with individual and school-level drivers, creating a complex web of influences that demand culturally tailored interventions.

Psychosocial well-being of schooling adolescents

Adolescents' psychosocial well-being, encompassing their emotional, social, and cognitive functioning, is a critical determinant of their overall development and behavioural outcomes. Existing literature suggests that adolescents with higher levels of psychosocial well-being, including emotional regulation, social competence, and life satisfaction, are less likely to engage in violent behaviour.

1)   Emotional functioning of adolescents to support their psychosocial well-being: Previous studies have highlighted the importance of emotional functioning, such as the ability to identify, express, and regulate emotions, in promoting adolescents' overall psychosocial well-being. Adolescents who struggle with emotional regulation are more likely to experience difficulties in social interactions and are at a higher risk of engaging in problem behaviours, including violence [15].

2)   Social competence of adolescents to support their psychosocial well-being: Social competence, which involves the ability to effectively navigate interpersonal relationships and engage in positive social interactions, is another key component of adolescents' psychosocial well-being. Adolescents with strong social skills are better equipped to develop and maintain healthy relationships with peers, teachers, and other significant individuals in their lives, which can serve as a protective factor against the development of violent behaviour ([15], [34]).

3)   Cognitive functioning of adolescents to support their psychosocial well-being: Cognitive functioning, including problem-solving skills, critical thinking, and decision-making abilities, is also crucial for adolescents' psychosocial well-being. Adolescents who possess these cognitive skills are better able to navigate the challenges of this developmental stage, make informed choices, and engage in responsible behaviours, all of which can contribute to their overall well-being and reduce the likelihood of them engaging in violent acts ([35], [34]).

School self-esteem of adolescents

School self-esteem, defined as an individual's positive self-evaluation of their academic competence and overall worth within the school setting, has been identified as an important factor in shaping adolescents' behavioural outcomes. Adolescents with high school self-esteem are more likely to feel a sense of belonging and attachment to their school, which can foster positive behaviours, such as academic engagement and prosocial interactions with peers [26]. In contrast, adolescents who struggle with low school self-esteem may experience a range of adverse psychosocial outcomes, including feelings of academic inadequacy, social isolation, and disengagement from the school environment [36].

The moderating role of school self-esteem between psychosocial well-being and violent behaviour

While previous research has consistently demonstrated the inverse relationship between adolescents' psychosocial well-being and their propensity for violent behaviour, the potential moderating influence of school self-esteem in this dynamic remains an important and understudied area of inquiry. Specifically, adolescents with a strong sense of self-worth and competence within the school context may be better equipped to maintain positive psychosocial functioning, even when faced with challenges or adversity, ultimately reducing their risk of engaging in violent behaviour.

Similarly, adolescents with low school self-esteem may be more vulnerable to the negative impact of poor psychosocial well-being, potentially leading to an increased likelihood of violent behaviour as a maladaptive

coping mechanism.

By examining the moderating role of school self-esteem, researchers can gain a more nuanced understanding of the complex interplay between adolescents' psychosocial well-being, their sense of self-worth within the school context, and their propensity for violent behaviour.

METHODOLOGY

This Study Employed Research Design

a cross-sectional research design to investigate the moderating role of school self-esteem on the impact of violent behaviour among adolescents in Douala on their psychosocial well-being.

Respondents and Sampling Procedure

The study sample was drawn from a population of 8953 adolescents enrolled in three secondary schools in Douala municipality, aged 13 to 18 years. A quota sampling technique was used to ensure equal representation of adolescents across age, gender, and socioeconomic status.

A total of 450 adolescents were selected to participate in the study, with a final sample of 414 (92% response rate) after accounting for incomplete or invalid responses.

Instruments

1) Psychosocial Well-being: The Warwick-Edinburgh Mental Well-being Scale (full version), a widely recognised and validated instrument, was employed to assess the participants' psychosocial well-being, capturing various dimensions of emotional, social, and cognitive functioning [37].

2) School Self-Esteem: The school scale of the self-esteem inventory of Coopersmith was used to measure the participants' sense of self-worth and competence within the school context [19].

3) Violent Behaviour: The Aggression Scale Questionnaire [32] was used to assess the participants' engagement in various forms of violent behaviour, including hitting, pushing, name-calling, threatening.

4) Demographic Information: A self-report questionnaire was used to collect data on participants' age, gender, and socioeconomic status.

Description of Procedures

The participants completed a comprehensive survey package, which included the aforementioned instruments, as well as demographic information. Prior to data collection, the study protocol was reviewed and approved by the institutional review board of the University of Douala, Cameroon.

Data Analysis

The data were analysed using a series of hierarchical multiple regression analyses to examine the moderating effect of school self-esteem on the relationship between psychosocial well-being and violent behaviour.

Specifically, in the first step, psychosocial well-being and school self-esteem were entered as predictors of violent behaviour. In the second step, the interaction term between psychosocial well-being and school self-esteem was added to the model to test for the moderating effect. Appropriate statistical assumptions, such as normality, linearity, and multicollinearity, were verified prior to conducting the analyses.

RESULTS: HYPOTHESES TESTING

The results of the hierarchical multiple regression analysis provided support for the proposed moderating effect of school self-esteem on the relationship between psychosocial well-being and violent behaviour among

adolescents in Douala, Cameroon.

Table I Means and Standard Deviations Among Study Variables

Variables	N	M	*SD*
Psychosocial well-being	414	47.28	8.372
School self-esteem	414	5.42	1.826
Violent behaviour	414	12.74	9.853

The descriptive statistics reveal critical insights into participants' psychological profiles. The WEMWBS mean (47.28/70, SD=8.372) indicates moderate psychosocial well-being, with scores clustering toward the upper range (left-skewed), suggesting most adolescents reported reasonable emotional health. The Coopersmith self-esteem mean (5.42/8, SD=1.826) reflects generally positive school self-perceptions, though limited variability (SD ≈23% of scale range) implies homogeneity in responses. In contrast, violent behaviour scores (12.74/66, SD=9.853) were right-skewed, with most reporting minimal aggression but a subset scoring highly, evidenced by the large SD (15% of scale range). This polarity underscores the presence of distinct risk subgroups despite overall low violence prevalence. The tight SDs for well-being/self-esteem (8–23% of scales) versus violence (15%) highlight greater consensus on positive traits but divergent aggression patterns.

Table II Hierarchical Regression Analysis Predicting Violent Behaviour

(N = 414)

Predictor	Step 1 β	Step 2 β	Step 3 β
Control Variables			
Age	-.07	-.06	-.05
Gender (female)	-.10*	-.08	-.07
School type	.04	.03	.02
Socioeconomic status	-.12*	-.09	-.08
Main Effects			
Psychosocial well-being		-.34***	-.32***
School self-esteem		-.30***	-.28***
Interaction			
WB × SE			-.18**
R^2	.04	.29	.32
ΔR^2		.25***	.03**

*p < .05. **p < .01. ***p < .001.

Hypothesis 1 (H₁): Supported. Psychosocial well-being significantly predicted lower violent behaviour (β = -.34, p < .001), accounting for 25% of the variance in Step 2.

Hypothesis 2 (H₂): Supported. School self-esteem was a significant negative predictor of violent behaviour (β = -.30, p < .001).

Hypothesis 3 (H₃): Supported. The interaction term (Psychosocial WB × School SE) was significant (β = -.18, p < .01, ΔR^2 = .03), indicating a moderating effect.

Simple slopes analysis (Figure 1) revealed that the negative relationship between psychosocial well-being and violent behaviour was stronger for adolescents with high school self-esteem ($\beta = -.47$, $p < .001$) compared to those with low self-esteem ($\beta = -.19$, $p < .05$).
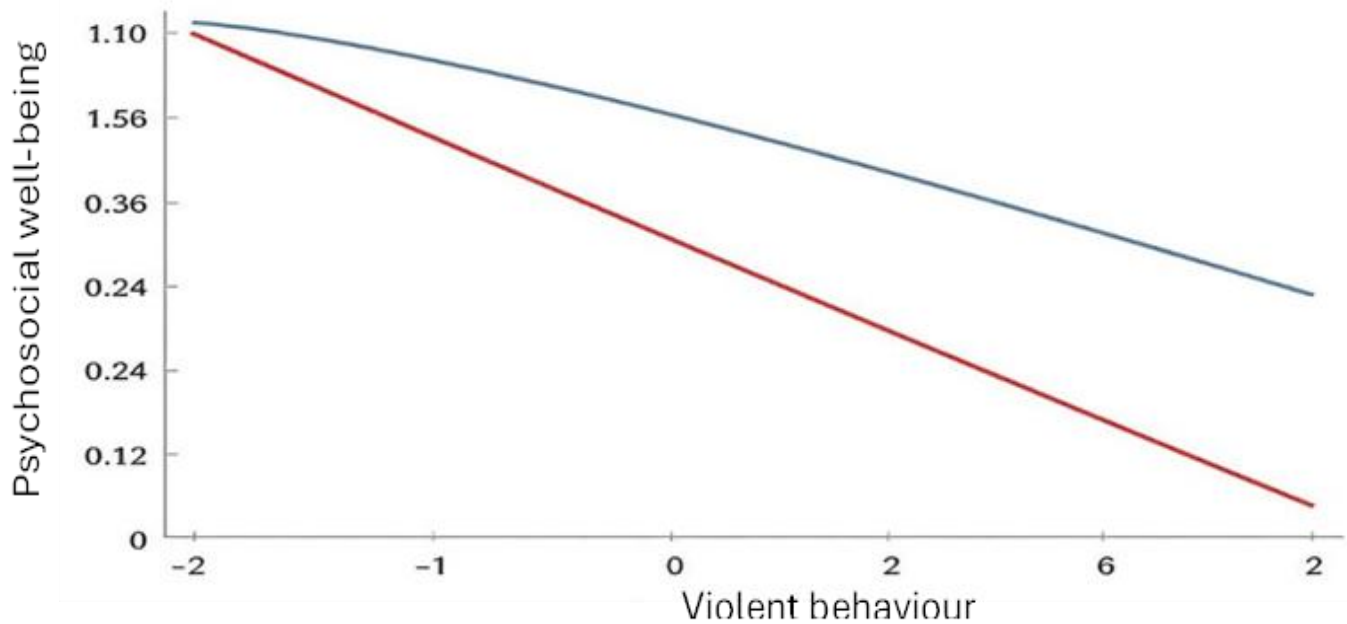

Fig. 1 Simple slopes analysis of the moderating effect of school self-esteem

In the first step of the analysis, psychosocial well-being and school self-esteem were both found to be significant predictors of violent behaviour, explaining a substantial proportion of the variance.

In the second step of the analysis, the interaction term between psychosocial well-being and school self-esteem was a significant predictor of violent behaviour, indicating a significant moderating effect, after controlling for the main effects of the two variables.

DISCUSSION

The findings of this study provide empirical evidence for the significant role of school self-esteem as a moderator in the relationship between psychosocial well-being and violent behaviour among adolescents in Douala, Cameroon.

These results underscore the importance of considering the interplay between these factors when designing interventions to promote adolescent well-being and prevent violence.

The observed moderating effect of school self-esteem suggests that adolescents with a stronger sense of self-worth and competence within the school environment may be better equipped to cope with psychosocial challenges, thereby reducing their likelihood of engaging in violent behaviour [31]. It indicates that fostering a positive school climate and promoting students' self-esteem may serve as protective factors against the negative consequences of psychosocial distress.

This study highlights the critical role of psychosocial well-being in mitigating violent behaviour among adolescents, aligning with prior research that underscores the importance of mental health and emotional stability in preventing aggressive tendencies [22]. This study's findings are consistent with previous studies, which have shown that students' resilience and fear of failure, along with their sense of belonging, play central roles in their well-being [14]. The present study suggests that enhancing adolescents' overall psychosocial well-being may contribute to a reduction in violent behaviour [10].

The study's results are consistent with previous research, indicating that promoting well-being among young people and protecting them from depression are associated with later academic success, thereby having both

individual and national benefits [10]. Furthermore, the findings align with a growing body of literature that recognises the importance of school-based interventions in promoting adolescent well-being and preventing violence. These interventions may include programs designed to improve students' self-esteem, enhance their social skills, and create a more supportive and inclusive school environment [17].

The finding that school self-esteem moderates the association between psychosocial well-being and violent behaviour suggests that schools can play a pivotal role in fostering a positive self-perception among students [40]. This can be achieved through various strategies, such as providing opportunities for academic success, recognising students' strengths and achievements, and promoting a sense of belonging and connectedness within the school community [7].

Building upon this, educators and school personnel could focus on implementing programs that cultivate students' mindsets, particularly the belief that personal characteristics can be developed (Yeager & Dweck, 2012). Interventions aimed at bolstering self-esteem and promoting a healthy lifestyle could significantly reduce stress and school violence, thereby enhancing adolescents' psychological well-being (Moreno & Jurado, 2023).

Given that mental health promotion is most effective when it occurs early in life, the school environment is an ideal setting for implementing these programs [33]. Further research is needed to explore the specific mechanisms through which school self-esteem exerts its moderating influence on the relationship between psychosocial well-being and violent behaviour, and to identify the most effective strategies for promoting school self-esteem among adolescents from diverse backgrounds.

The study is consistent with the research asserting that the school environment plays a pivotal role in preventing school violence, especially in deterring the initiation and diminishing the intensity of such violence [22]. Schools can promote violence prevention by increasing students' connectedness to the school, providing them with opportunities for prosocial involvement, teaching them social skills, and creating a safe and supportive school climate.

The school plays a critical role in reducing and preventing adolescents' suicidal ideation, by creating a positive school climate and a sense of belonging to school which buffered the relationship between cyberbullying victimisation and suicidal ideation [24] .

Ultimately, schools can serve as protective factors, because schools are one of the safest places for children and adolescents to be physically; however, this is often not true psychosocially ([9], [25]). Therefore, schools must focus on promoting healthy development for children in order to create conditions that allow students to thrive [21].

Limitations And Future Research

Despite the valuable insights provided by this study, it is important to acknowledge its limitations. First, the cross-sectional design of the study limits the ability to establish causal relationships between psychosocial well-being, school self-esteem, and violent behaviour.

Longitudinal studies are needed to examine the directionality of these relationships and to determine whether changes in school self-esteem and psychosocial well-being precede changes in violent behaviour.

Second, the reliance on self-report measures may be subject to social desirability bias, as adolescents may be hesitant to report violent behaviour or negative feelings about themselves or their school environment. Future studies could benefit from incorporating multiple methods of data collection, such as teacher reports, peer nominations, and observational data, to provide a more comprehensive assessment of these constructs.

Third, the study was conducted in a specific cultural context, and the findings may not be generalisable to other populations or settings.

Additional research is needed to examine the role of school self-esteem as a moderator of the relationship between psychosocial well-being and violent behaviour in diverse cultural contexts, taking into account factors such as socioeconomic status, ethnic background, and community violence exposure

CONCLUSION

This study examined the complex interplay between psychosocial well-being, school self-esteem, and violent behaviour among Cameroonian schooling adolescents in the Douala Municipality. The findings robustly supported all three hypotheses, demonstrating that: (1) higher psychosocial well-being significantly predicted lower violent behaviour; (2) elevated school self-esteem similarly reduced violent tendencies; and (3) school self-esteem moderated this relationship, with the protective effect of well-being being nearly twice as strong for adolescents with high self-esteem versus low self-esteem. The hierarchical regression explained 32% of the variance in violent behaviour, with the interaction term contributing a significant 3% increment.

The moderation effect varied by school type, being strongest in denominational schools and non-significant in lay private institutions. This aligns with ecological systems theory, suggesting that school climate qualitatively alters how psychological resources buffer against violence.

The results extend existing literature by empirically validating the school self-esteem moderation model in a sub-Saharan African context. They highlight how intra-individual factors (well-being) and school-based self-perceptions interact to shape behavioural outcomes, with the strength of these relationships being context-dependent. Future research should explore the mechanisms underlying these school-type differences.

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