School Climate and Mental Well-Being among Public Senior Secondary School Students in Delta Central Senatorial District

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DOI: https://doi.org/10.47772/IJRISS.2026.101000246

Received: 13 October 2026; Accepted: 18 October 2026; Published: 01 November 2026

ABSTRACT

This study examined the relationship between school climate and mental well-being among public senior secondary school students in Delta Central Senatorial District, Delta State, Nigeria. Specifically, it investigated the relationships of school safety, interpersonal relationships, and teaching and learning with students' mental well-being. Bronfenbrenner's Ecological Systems Theory provided the main theoretical framework, supported by Self-Determination Theory. The study adopted a convergent parallel mixed-methods design. The population comprised 45,318 students in Senior Secondary I-III across 196 public secondary schools. The quantitative sample consisted of 397 students selected from 20 public secondary schools across eight Local Government Areas, of whom 382 completed questionnaires were retrieved and analysed. Additionally, 24 students participated in semi-structured interviews. Data were collected using the researcher-developed School Climate and Mental Well-Being Questionnaire and an interview guide. Quantitative data were analysed using descriptive statistics, Pearson product-moment correlation, and multiple regression, while qualitative data were analysed thematically. The findings revealed significant positive relationships between school safety and mental well-being ($r = .786$, $p < .001$), interpersonal relationships and mental well-being ($r = .842$, $p < .001$), and teaching and learning and mental well-being ($r = .684$, $p < .001$). Multiple regression results showed that all three dimensions made significant positive contributions to mental well-being, with teaching and learning having the strongest unique contribution ($\beta = .378$, $p < .001$). The qualitative findings complemented the quantitative results, highlighting psychological security, emotional distress associated with negative relationships, confidence arising from effective teaching, and frustration associated with academic difficulties. The study recommends that school administrators monitor safety concerns, promote supportive interpersonal relationships, and encourage teachers to provide clear explanations and appropriate academic support. The findings establish associations rather than causal effects.

Keywords*:* school climate, mental well-being, school safety, interpersonal relationships, teaching and learning

INTRODUCTION

Mental well-being is an important part of healthy adolescent development. It extends beyond the absence of mental illness to include positive emotions, effective functioning, meaningful relationships, and the ability to cope with everyday demands. Keyes (2002) conceptualises mental health along a continuum ranging from languishing to flourishing. From this perspective, a young person may not have a diagnosed mental disorder but may still experience low well-being, limited social functioning, a weak sense of purpose, or difficulty

coping with daily challenges. Mental well-being can therefore be understood as a positive state in which individuals experience positive feelings, function effectively, maintain meaningful relationships, and derive a reasonable sense of purpose and satisfaction from life.

This is particularly important during adolescence, a period of considerable emotional, social, cognitive, and psychological development. Young people must adjust to changing relationships, increasing academic demands, and decisions about their future. The World Health Organization (WHO, 2025) estimates that approximately one in seven adolescents aged 10-19 years experiences a mental health condition globally. Mental health difficulties during this period can affect education, relationships, and social participation. However, supportive environments at home, in school, and in the wider community can help protect adolescent mental health. These concerns make students' mental well-being an important issue for schools, where daily experiences form part of their wider developmental environment.

Schools serve purposes beyond academic instruction. They are environments in which students interact with

teachers and peers, respond to rules and expectations, experience academic success or difficulty, and develop perceptions of whether they are safe, accepted, and supported. These experiences are captured by the concept of school climate. Thapa et al. (2013) describe school climate as a multidimensional concept encompassing safety, relationships, teaching and learning, and the wider school environment. Wang and Degol (2016) similarly identify academic, social, safety, and institutional dimensions of school climate. School climate therefore concerns students' experiences of important aspects of school life rather than simply the physical condition of school facilities.

School safety is one important dimension of school climate. Students need to feel that they can learn without fear of bullying, intimidation, violence, harassment, or other threats. Safety also involves confidence that school rules are applied fairly and that school personnel respond appropriately when problems arise. In a systematic review of research on school climate and adolescent mental health and well-being, Aldridge and McChesney (2018) identified school safety among the school-related factors associated with adolescent psychological outcomes. Evidence from Nigeria also highlights the relevance of school-based protective factors. Adewuya et al. (2026), in a study involving 9,437 adolescents from 47 secondary schools in Lagos State, examined school protective factors in relation to adolescent mental health. Their findings highlighted the relevance of factors such as protection from bullying, positive teacher and peer relationships, and school belonging to adolescent mental health outcomes. Although this study examined mental health conditions rather than overall mental well-being, it provides useful evidence of the relationship between students' school experiences and psychological outcomes in the Nigerian context.

Interpersonal relationships constitute another important dimension of school climate. Relationships with teachers and classmates can influence whether students feel accepted, connected, and supported within their school. Positive relationships may provide students with people they can approach when they encounter academic, social, or personal difficulties. In contrast, rejection, bullying, social exclusion, and unsupportive interactions with teachers may make school life more difficult. Aldridge and McChesney (2018) identified social and peer connectedness among the school-climate factors associated with adolescent mental health and well-being. The findings reported by Adewuya et al. (2026) also highlight the relevance of positive teacher relationships, peer relationships, and school belonging. These findings provide a basis for examining how students' relationships within school relate to their mental well-being.

Teaching and learning also shape students' daily school experiences. Teachers' instructional practices, explanations, feedback, expectations, and support can influence how students understand their lessons and respond to academic demands. Even where physical facilities are adequate, students may have negative school experiences if classroom interactions are unsupportive or they receive insufficient help with their learning. Wang and Degol (2016) identify the academic dimension as a central component of school climate. Research on classroom climate also links supportive learning environments with students' academic, social, motivational, and emotional outcomes. Wang et al. (2020), in a systematic review and meta-analysis, examined relationships between classroom climate and children's academic and psychological well-being. Their work highlights the relevance of classroom experiences to students' academic and psychological

outcomes. Although classroom climate and school climate are not identical, this evidence supports the importance of examining students' experiences of teaching and learning within the broader school environment.

Despite growing research interest in school climate and adolescent mental health, important issues remain. One concern is the variation in how school climate is conceptualised and measured. Thapa et al. (2013) and Wang and Degol (2016) describe school climate as a multidimensional construct, but the dimensions examined differ across studies. Aldridge and McChesney (2018) also identified differences in the conceptualisation and measurement of school climate and highlighted the need for further research across different contexts. Examining clearly defined dimensions within a specific educational setting can therefore contribute to a more context-sensitive understanding of school climate. Another consideration is the need to examine positive mental well-being alongside outcomes such as mental illness, psychological distress, and behavioural difficulties. Although these outcomes are important, they do not fully capture how well students feel and function in their daily lives. Mental well-being offers a complementary perspective by focusing on positive experiences and functioning rather than only the presence or absence of psychological problems. For secondary school students, this is very relevant because promoting well-being involves creating conditions that help them feel safe, connected, supported, and capable of engaging in learning.

The Nigerian context warrants further investigation because findings from other countries cannot automatically be assumed to reflect the experiences of students in Nigerian schools. Existing Nigerian evidence provides useful insights into the relevance of school safety, relationships, belonging, and other protective factors to adolescent mental health. However, there remains a need to examine how specific dimensions of school climate relate to students' overall mental well-being in different educational settings. In Delta Central Senatorial District, Odofin and Igabari (2023) examined mental health and examination anxiety among secondary school students. Their study provides relevant local evidence on students' psychological experiences but did not specifically investigate the relationships between school safety, interpersonal relationships, teaching and learning, and overall mental well-being. The current study addresses this related but distinct question by examining these three dimensions of school climate in relation to students' mental well-being.

Students' own accounts are also important for understanding how school conditions and daily interactions are experienced in practice. Quantitative analysis can establish the direction and strength of relationships between school climate and mental well-being, while qualitative accounts can provide insight into students' experiences of safety, relationships, and teaching and learning. Combining both forms of evidence can therefore provide a broader understanding of the relationships under investigation and how students perceive their school environment.

The issue also relates to wider educational and development goals. This study aligns with Sustainable Development Goal 3 (Good Health and Well-Being), particularly Target 3.4, which includes promoting mental health and well-being. It also relates to Sustainable Development Goal 4 (Quality Education), especially Target 4.a, which emphasises safe, non-violent, inclusive, and effective learning environments (United Nations, n.d.-a, n.d.-b).

Examining the relationship between school climate and students' mental well-being can therefore contribute to discussions about how schools may support student well-being while providing quality education. Against this background, this study examines the relationship between school climate and mental well-being among public senior secondary school students in Delta Central Senatorial District, Delta State, Nigeria. It specifically focuses on school safety, interpersonal relationships, and teaching and learning. By combining quantitative analysis with students' accounts of their school experiences, the study seeks to provide a more comprehensive understanding of how these dimensions of school climate relate to students' overall mental well-being.

Statement of the Problem

Poor school safety, strained interpersonal relationships, and unsupportive teaching and learning experiences

threaten students' mental well-being. Students who experience bullying, humiliation, hostile relationships, and persistent learning difficulties face emotional distress and reduced engagement with school. When these problems persist, they undermine students' well-being and academic development, and weaken the school environment. They also place a long-term burden on society through the loss of young people's educational and social potential. Despite the importance of school climate to students' experiences, the relationship between school safety, interpersonal relationships, teaching and learning, and mental well-being among public senior secondary school students in Delta Central Senatorial District remains insufficiently established. This study therefore investigates these relationships to provide evidence for improving students' well-being and school experiences. The problem of the study is the inadequate understanding of the relationship between school climate and the mental well-being of public senior secondary school students in Delta Central Senatorial District.

THEORETICAL FRAMEWORK

This study is anchored in Bronfenbrenner's Ecological Systems Theory (1979), with support from Self-Determination Theory (Deci & Ryan, 2000). Ecological Systems Theory provides the main framework for understanding how students' immediate school environment relates to their mental well-being, while Self-Determination Theory offers further insight into the psychological needs that may be associated with their school experiences.

Bronfenbrenner's theory emphasises the role of environmental systems in human development, particularly the interactions individuals have within their immediate surroundings. The school represents an important microsystem in students' lives because it provides a setting for regular interactions with teachers and peers and for daily teaching and learning experiences. The quality of these experiences may be associated with students' mental well-being. In this study, school safety, interpersonal relationships, and teaching and learning represent the three dimensions of school climate examined within this microsystem. A safe school environment may provide students with a sense of security, positive relationships may offer social support, and supportive teaching practices may encourage confidence and engagement. However, unsafe conditions, negative relationships, and difficulties with classroom learning may be associated with less positive mental well-being.

Self-Determination Theory complements this ecological perspective by explaining the importance of three basic psychological needs: relatedness, competence, and autonomy. Relatedness concerns feeling accepted and connected to others, competence involves feeling capable of handling tasks and challenges, and autonomy refers to experiencing a sense of choice and personal agency. Within the school environment, positive relationships with teachers and classmates may support relatedness, while clear instruction and appropriate academic support may foster competence. Opportunities for students to express their views and participate in learning may also support autonomy. When students' psychological needs are inadequately supported, they may experience frustration, discouragement, and reduced well-being.

Bronfenbrenner's Ecological Systems Theory therefore provides the primary basis for examining school climate as part of students' immediate social environment, while Self-Determination Theory helps explain how experiences within that environment may relate to their mental well-being. These perspectives inform the examination of school safety, interpersonal relationships, and teaching and learning in relation to students' mental well-being.

Purpose of the Study

The main purpose of this study was to examine the relationship between school climate and mental well-being among public senior secondary school students in Delta Central Senatorial District. To achieve this, the study sought to:

1. determine the relationship between school safety and mental well-being among public senior secondary school students in Delta Central Senatorial District.

2. determine the relationship between interpersonal relationships and mental well-being among public senior secondary school students in Delta Central Senatorial District.

3. determine the relationship between teaching and learning and mental well-being among public senior secondary school students in Delta Central Senatorial District.

Research Questions

The following research questions guided the study:

1. What is the relationship between school safety and mental well-being among public senior secondary school students in Delta Central Senatorial District?

2. What is the relationship between interpersonal relationships and mental well-being among public senior secondary school students in Delta Central Senatorial District?

3. What is the relationship between teaching and learning and mental well-being among public senior secondary school students in Delta Central Senatorial District?

Hypotheses

The following formulated null hypotheses were tested at the 0.05 level of significance:

1. There is no significant relationship between school safety and mental well-being among public senior secondary school students in Delta Central Senatorial District.

2. There is no significant relationship between interpersonal relationships and mental well-being among public senior secondary school students in Delta Central Senatorial District.

3. There is no significant relationship between teaching and learning and mental well-being among public senior secondary school students in Delta Central Senatorial District.

METHODOLOGY

The study adopted a mixed-methods research design, specifically the convergent parallel design. This design was appropriate because it enabled the researchers to examine school climate and mental well-being among public senior secondary school students using both quantitative and qualitative approaches within the same study period. Quantitative and qualitative data were analysed independently and subsequently integrated to identify areas of convergence, complementarity, and divergence in the findings.

The population of the study comprised 45,318 senior secondary school students in Senior Secondary I to Senior Secondary III (SS I–SS III) across 196 public secondary schools in Delta Central Senatorial District during the 2024/2025 academic session. The population figure was obtained from the Exams and Standards Department of the Delta State Ministry of Basic and Secondary Education. Using Taro Yamane's formula, a sample size of 397 students was determined for the study.

A multistage sampling procedure was used to select participating schools and students from public senior secondary schools in Delta Central Senatorial District, Delta State, Nigeria. At the first stage, the number of schools to be selected was determined in relation to the sample size required for the study. A total of 20 public secondary schools were selected across the eight Local Government Areas (LGAs) in the district: Ethiope East, Ethiope West, Okpe, Sapele, Udu, Ughelli North, Ughelli South, and Uvwie. This distribution ensured that all eight LGAs were covered by the study. At the second stage, students in Senior Secondary School I (SS I), Senior Secondary School II (SS II), and Senior Secondary School III (SS III) were selected from the participating schools. The target was to select 20 students from each school. However, 17 students were selected from one school, while 20 students were selected from each of the remaining 19 schools,

resulting in a total sample of 397 students. Students were randomly selected from those willing to participate.

The qualitative component involved 24 students purposively selected from those who participated in the quantitative component. Their selection was not based on their scores on the School Climate and Mental Well-Being Questionnaire (SCMWQ), as the interviews sought to explore their experiences and perceptions of school climate and mental well-being independently of their questionnaire scores. Data were collected using a structured, researcher-developed questionnaire titled the School Climate and Mental Well-Being Questionnaire (SCMWQ), alongside interviews for the qualitative component.

The SCMWQ comprised 30 items divided into two main sections: school climate and students' mental well-being. The school climate section contained 15 items covering three dimensions: school safety, interpersonal relationships, and teaching and learning, with five items per dimension. School safety assessed students' perceptions of protection from harm and threats within the school environment. Interpersonal relationships addressed interactions among students and between students and teachers, while teaching and learning focused on instructional practices and teachers' support for students' learning.

Representative questionnaire items included: “I feel safe while moving around within my school”; “Teachers and school authorities take appropriate action when safety concerns arise”; and “My school provides an environment where students feel physically secure” to assess school safety. For interpersonal relationships, examples included: “Students in my school treat one another with respect”; “Teachers encourage students to express their opinions freely”; and “Students and teachers maintain friendly relationships in my school.” For teaching and learning, examples included: “Teachers encourage students to participate actively in classroom activities”; “Teachers provide assistance when students experience difficulties with their schoolwork”; and “Teachers give students useful feedback to improve their learning.” Responses to the school climate items were rated on a five-point scale: To a Very High Extent (5), To a High Extent (4), To a Moderate Extent (3), To a Low Extent (2), and To a Very Low Extent (1). Higher scores indicated stronger positive perceptions of the respective school climate dimensions.

The mental well-being section comprised 15 researcher-developed items designed to assess students' overall positive mental well-being. The conceptual development of these items was informed by existing literature and established instruments, including the Warwick-Edinburgh Mental Well-being Scale (WEMWBS; Tennant et al., 2007). However, the SCMWQ items were developed by the researcher rather than directly adopted or adapted from the WEMWBS.

The conceptual coverage included positive emotional well-being, positive psychological functioning, and personal competence and self-acceptance. Positive emotional well-being concerned positive feelings, such as optimism and happiness. Positive psychological functioning concerned clear thinking and managing everyday challenges, while personal competence and self-acceptance concerned confidence in one's abilities and positive self-evaluation.

Representative questionnaire items included: “I feel optimistic about my future”; “I experience positive feelings about myself”; and “I feel hopeful even when I face difficulties” to assess positive emotional well-being. Positive psychological functioning was assessed using items such as: “I can think clearly when making decisions”; “I find it easy to concentrate on my daily activities”; and “I feel able to handle the responsibilities expected of me.” Personal competence and self-acceptance were assessed using items such as: “I feel confident in my abilities”; “I recognise and appreciate my personal strengths”; and “I feel satisfied with the person I am.” Responses were rated on a five-point scale: Very Often (5), Often (4), Sometimes (3), Rarely (2), and Never (1). Higher total scores indicated higher levels of reported positive mental well-being.

The two sections assessed conceptually distinct constructs. The school climate items measured students' perceptions of their school environment, whereas the mental well-being items assessed positive feelings and aspects of psychological functioning. School climate was treated as the predictor variable and mental well-being as the outcome variable. However, the empirical distinctiveness of the constructs was not independently established through factor analysis or a separate discriminant-validity assessment.

Qualitative data were collected through individual semi-structured interviews with 24 students selected from the questionnaire participants. An interview guide comprising 12 open-ended questions was used to explore students' experiences and perceptions of school safety, interpersonal relationships, teaching and learning, and mental well-being.

Examples of the guiding questions included: “How do incidents such as bullying, threats, or fighting affect how you feel when you are at school?”; “How does the way your teachers and classmates treat you affect how you feel at school?”; and “How do you feel when you understand the subjects taught in class compared with when you find them difficult to understand?” Follow-up questions were used where necessary to clarify responses and encourage further explanation.

The researcher-developed School Climate and Mental Well-Being Questionnaire (SCMWQ) was reviewed by two experts in Educational Psychology and one expert in Measurement and Evaluation. They assessed the clarity, relevance, appropriateness, and coverage of the items in relation to the intended constructs: school safety, interpersonal relationships, teaching and learning, and mental well-being. Their assessment examined whether the items adequately represented the intended constructs and whether the wording was appropriate for senior secondary school students. The experts' recommendations were incorporated before pilot testing, providing evidence supporting the instrument's face and content validity.

A pilot study was subsequently conducted with 30 students from two secondary schools outside the study area to assess the instrument’s internal consistency using Cronbach’s alpha. The coefficients were .76 for school safety, .78 for interpersonal relationships, .74 for teaching and learning, .83 for mental well-being, and .82 for the overall questionnaire. Thus, the validity evidence was based primarily on expert review, while the pilot study provided preliminary evidence of internal consistency.

Questionnaires were administered to the selected students with the assistance of research assistants where necessary. Of the 397 questionnaires administered, 382 completed questionnaires were retrieved and found usable for data analysis, representing a response rate of 96.2%.

With participants’ consent, the interviews were audio-recorded and transcribed. The recordings were checked against the transcripts for accuracy, and identifying information was removed to protect confidentiality.

Quantitative data were analysed using the Statistical Package for the Social Sciences (SPSS), version 25. Descriptive statistics, including mean and standard deviation, were used to describe students’ scores on school safety, interpersonal relationships, teaching and learning, and mental well-being. Pearson Product-Moment Correlation Coefficient was used to examine the relationships between the three school-climate dimensions and students’ mental well-being. Multiple regression analysis was conducted to examine the unique contributions of the three school-climate dimensions to mental well-being while accounting for their shared variance. Regression assumptions were assessed by examining residual histograms, normal P-P plots, scatterplots of standardised predicted values against standardised residuals, tolerance values, and variance inflation factors (VIF). Statistical significance was set at the 0.05 level.

The transcripts were analysed thematically. The process involved familiarisation with the transcripts, coding relevant responses, grouping related codes, and developing themes from recurring patterns in participants’ accounts. Four themes were identified across the three school-climate dimensions: (1) safety as a source of psychological security; (2) negative interpersonal relationships as a source of emotional distress; (3) effective teaching as a source of confidence and positive feelings; and (4) academic difficulties as a source of frustration and emotional distress. Consistent with the convergent parallel mixed-methods design, the quantitative and qualitative data were analysed separately and subsequently integrated during interpretation to examine areas of convergence, complementarity, and divergence.

Ethical Considerations

Permission to conduct the study was obtained from the relevant school authorities through formal written

equests and personal visits to the participating schools. The purpose of the study was explained, and consent was obtained from participating students. Participation was voluntary, and students were informed about confidentiality and their right to withdraw. Interview transcripts were anonymised by removing identifying information to protect participants' identities. Authorisation to conduct the study was granted by the participating school authorities.

RESULTS

The results are presented in relevant tables to address the research questions and test the stated null hypotheses.

Table 1

Descriptive Statistics for School Climate and Mental Well-Being

Variables	N	Minimum	Maximum	M	SD
Safety_Mean	382	1.0	5.0	4.077	.7264
Relationships _Mean	382	1.0	5.0	4.129	.8220
Teaching _Mean	382	1.0	5.0	4.094	.8041
Well-Being_Mean	382	1.0	5.0	4.019	.6093

Table 1 presents the descriptive statistics for school climate and students' mental well-being among 382 students. Interpersonal relationships recorded the highest mean score (M = 4.129, SD = 0.8220), followed by teaching and learning (M = 4.094, SD = 0.8041) and school safety (M = 4.077, SD = 0.7264). Students' mental well-being had a mean score of (4.019, SD = 0.6093). The standard deviations indicate some variability in students' scores across the four variables, with mental well-being showing the least variability. The minimum observed score was 1.0, while the maximum observed score was 5.0 for all four variables.

Table 2

Multiple Regression Analysis Predicting the Outcome Variable

Predictor	B	Standardised β	t	p	95% CI for B
School safety	0.268	0.32	6.544	< .001	[.188, .349]
Interpersonal relationships	0.079	0.105	2.111	0.035	[.005, .153]
Teaching and learning	0.28	0.378	8.403	< .001	[.215, .346]

Model summary: $R = .664$; $R^2 = .441$; Adjusted $R^2 = .436$; $F(3, 378) = 99.205$, $p < .001$.

Note. B = unstandardised regression coefficient; β = standardised regression coefficient; CI = confidence interval.

The multiple regression analysis showed that school safety, interpersonal relationships, and teaching and learning jointly predicted students' mental well-being, $F(3, 378) = 99.205$, $p < .001$. The model explained 44.1% of the variance in mental well-being ($R^2 = .441$; adjusted $R^2 = .436$). Teaching and learning was the strongest predictor ($\beta = .378$, $p < .001$), followed by school safety ($\beta = .320$, $p < .001$) and interpersonal relationships ($\beta = .105$, $p = .035$). Each dimension made a statistically significant positive contribution when the other two dimensions were held constant.

Research Question 1: What is the relationship between school safety and mental well-being among public senior secondary school students in Delta Central Senatorial District?

Hypothesis 1: There is no significant relationship between school safety and mental well-being among public senior secondary school students in Delta Central Senatorial District.

Table 3 *Joint Display of Quantitative and Qualitative Findings on School Safety and Mental Well-Being*

School climate dimension	Quantitative finding	Qualitative question, theme and responses	Relationship between findings
School Safety	r = .786, p < .001	**Question:** How do incidents such as bullying, threats, or fighting affect how you feel when you are at school?	Convergence and complementarity: The positive correlation is consistent with students' accounts of feeling more comfortable in a safe school environment. The interviews also illustrate the fear and discomfort associated with fighting.
		Theme: Safety as a Source of Psychological Security.	
		Positive: "I feel more comfortable in school when I know that nobody will threaten or bully me." (P3)	
		Negative: "When there is fighting around the school, I become afraid and I don't feel comfortable." (P12)	

Source: Field Data, 2026.

The joint findings show convergence between the quantitative and qualitative results. The strong, positive, statistically significant relationship indicates that higher perceived school safety is associated with higher mental well-being. Students' accounts complement this finding by illustrating how a safe school environment promotes comfort, while fighting and threats create fear and discomfort.

Research Question 2: What is the relationship between interpersonal relationships and mental well-being among public senior secondary school students in Delta Central Senatorial District?

Hypothesis 2: There is no significant relationship between interpersonal relationships and mental well-being among public senior secondary school students in Delta Central Senatorial District.

Table 4

Joint Display of Quantitative and Qualitative Findings on Interpersonal Relationships and Mental Well-Being

School climate dimension	Quantitative finding	Qualitative question, theme and responses	Relationship between findings
Interpersonal Relationships	r = .842, p < .001	**Question:** How does the way your teachers and classmates treat you affect how you feel at school?	Complementarity: The strong positive correlation indicates that more positive interpersonal relationships are associated with higher mental well-being. The negative account illustrates how ridicule and negative peer interactions can contribute to sadness and reduced interest in school, while the positive account highlights how teacher encouragement and kindness from classmates can foster happiness and a sense of acceptance.
		Theme: Negative Interpersonal Relationships as a Source of Emotional	

		Distress.
		Positive: "When my teachers encourage me and my classmates treat me kindly, I feel happy and accepted in school." (P16)
		Negative: "When my classmates laugh at me or make me feel inferior, I become sad and sometimes lose interest in coming to school." (P9)

Source: Field Data, 2026.

The joint findings show convergence between the quantitative and qualitative results. The strong, positive, statistically significant correlation indicates that more positive interpersonal relationships are associated with higher mental well-being. The interview responses complement this finding by illustrating how encouragement and kindness foster happiness and acceptance, while ridicule can contribute to sadness and reduced interest in attending school.

Research Question 3: What is the relationship between teaching and learning and mental well-being among public senior secondary school students in Delta Central Senatorial District?

Hypothesis 3: There is no significant relationship between teaching and learning and mental well-being among public senior secondary school students in Delta Central Senatorial District.

Table 5

Joint Display of Quantitative and Qualitative Findings on Teaching and Learning and Mental Well-Being

School climate dimension	**Quantitative finding**	**Qualitative question, theme and responses**	**Relationship between findings**
Teaching and Learning	$r = .684$, $p < .001$	**Question:** How do you feel when you understand the subjects taught in class compared with when you find them difficult to understand?	Complementarity: The positive correlation indicates that more positive teaching and learning experiences are associated with higher mental well-being. The contrasting accounts illustrate how understanding lessons may support confidence, while difficulty understanding subjects may contribute to frustration and discouragement.
		Theme: Academic Difficulties as a Source of Frustration and Emotional Distress	
		Positive: "When I understand what my teachers teach, I feel happy and confident because I can follow the lessons and answer questions in class." (P8)	
		Negative: "Some subjects are very difficult for me to understand, even when the teacher explains them. This makes me feel frustrated and discouraged, and sometimes I worry about my ability to do well in school." (P 12)	

Source: Field Data, 2026.

The joint findings show convergence between the quantitative and qualitative results. The strong, positive, statistically significant correlation indicates that more positive teaching and learning experiences are associated with higher mental well-being. The interview responses complement this finding by illustrating how understanding lessons can foster confidence and happiness, while difficulty understanding subjects can contribute to frustration, discouragement, and worry.

DISCUSSION OF FINDINGS

School Safety and Mental Well-Being

The findings showed a strong positive relationship between school safety and students' mental well-being ($r = .786$, $p < .001$). The interview responses provided further insight into this relationship. Participant P3 described feeling more comfortable at school when free from threats and bullying, while P12 reported fear and discomfort when fighting occurred around the school. These accounts illustrate how students' experiences of safety and insecurity relate to their feelings at school.

This finding is consistent with Lester and Cross (2015), who examined school climate and students' mental and emotional well-being during the transition from primary to secondary school. They found that perceived safety was an important predictor of well-being, particularly during the first year of secondary school. However, the strongest school climate predictor varied across the transition period, suggesting that different aspects of school climate may be more important at different developmental stages. Although the present study also found a strong relationship, its correlation coefficient cannot be directly compared with findings from studies using different analytical approaches.

Leurent et al. (2021) found that positive school-climate ratings were associated with better mental well-being and fewer emotional and conduct problems at follow-up. However, these associations weakened considerably after adjustment for baseline mental health. This suggests that students' existing psychological experiences may partly account for the relationship between school climate and later mental health. Their findings provide relevant evidence for the present study, although they examined overall school climate and several psychological outcomes rather than school safety specifically.

In Nigeria, Adewuya et al. (2026) found that school protective factors, including positive peer relationships, teacher support, school belonging, and absence of bullying, were associated with lower odds of mental health conditions among adolescents in Lagos State. Awhangansi (2025) also found that bullying victimisation was associated with greater emotional and behavioural difficulties among junior secondary school students in Ogun State. These findings highlight the relevance of supportive school environments and the potential psychological difficulties associated with bullying. However, both studies focused on mental health conditions or psychological difficulties rather than positive mental well-being. Their findings are therefore related to, but not direct measures of, the outcome examined in the present study.

Bronfenbrenner's (1979) Ecological Systems Theory helps explain the findings by recognising the importance of students' immediate environments, including school, in their development. Threats, bullying, and fighting may make the school environment feel less secure, as illustrated by P12's account. Self-Determination Theory (Ryan & Deci, 2000) offers another perspective through its emphasis on relatedness, the need to feel connected to and cared for by others. Although safety is not one of the theory's three basic psychological needs, a supportive school environment may help students develop positive relationships and feel accepted.

The present study contributes evidence of a strong relationship between school safety and positive mental well-being among public senior secondary school students in Delta Central Senatorial District. The interview accounts provide context for this association, while the existing literature highlights the importance of considering students' developmental stages, prior mental health, and the particular psychological outcomes measured. However, the correlational design does not establish that school safety causes higher mental well-being.

Interpersonal Relationships and Mental Well-Being

The findings revealed a strong positive relationship between interpersonal relationships and students' mental well-being ($r = .842$, $p < .001$). Of the three school-climate dimensions examined, interpersonal relationships exhibited the strongest observed association with mental well-being in the present sample. However, this does not establish that interpersonal relationships are the most influential school-climate factor, as

correlation coefficients indicate the strength of associations rather than causal influence. The interview responses provided further context for this relationship. For example, P9 described how being laughed at by classmates and made to feel inferior led to sadness and sometimes reduced interest in attending school. This account illustrates how negative peer interactions may be related to students' emotional experiences at school.

Adewuya et al. (2026) found that school protective factors, including positive peer relationships, teacher support, and school belonging, were associated with lower odds of mental health conditions among adolescents in Lagos State. Awhangansi et al. (2025) examined bullying victimisation and psychopathology among Nigerian adolescents, highlighting the relevance of negative peer experiences to psychological difficulties. These studies complement the present findings by demonstrating the psychological significance of students' social experiences at school. However, their outcomes differ from the positive mental well-being measured in the present study. Positive mental well-being is not simply the absence of mental health conditions or psychopathology; therefore, the findings are related but cannot be directly compared in terms of effect magnitude.

Bronfenbrenner's (1979) Ecological Systems Theory provides a framework for understanding the relationship by emphasising the role of students' immediate social environments in their development. Ryan and Deci's (2000) Self-Determination Theory also highlights relatedness, the need to feel connected to and accepted by others, as a basic psychological need. Supportive interactions with teachers and classmates may help meet this need, while negative interactions may undermine students' sense of acceptance.

Nevertheless, the relationship may be reciprocal. Although negative interpersonal experiences may be associated with poorer mental well-being, students experiencing poorer mental well-being may also perceive or interpret their school relationships more negatively. The correlational design of the present study cannot establish the direction of this relationship or determine whether either factor influences the other. The finding should therefore be interpreted as evidence of a strong association between interpersonal relationships and mental well-being in the study sample, rather than proof of a causal or uniquely influential effect.

Teaching and Learning and Mental Well-Being

The findings revealed a positive relationship between teaching and learning experiences and students' mental well-being ($r = .684$, $p < .001$). This indicates that more positive teaching and learning experiences were associated with higher mental well-being among the students. The interview accounts complemented this finding by illustrating how understanding lessons could be associated with happiness and confidence, whereas difficulty understanding subjects could be associated with frustration, discouragement, and worry about academic performance.

Kristensen and Jeno (2024) found that teacher autonomy support was positively associated with mental well-being and negatively associated with academic stress among Norwegian upper-secondary students. Their longitudinal findings provide a useful comparison because they demonstrate that students' perceptions of teacher support are associated with changes in psychological well-being and academic stress over time. However, their study examined teacher autonomy support specifically, whereas the present study assessed the broader teaching and learning dimension of school climate. The correlation coefficient obtained in the present study therefore cannot be directly compared with the coefficients reported in their longitudinal analyses.

Reshu et al. (2025) found that academic stress was positively associated with adolescent stress and examination anxiety among Indian upper-secondary students. They also reported associations between teaching methods, teacher-student relationships, and stress related to school performance and examination anxiety. These findings provide a complementary perspective on the psychological experiences associated with academic demands and teaching-related factors. However, the study focused on stress and examination anxiety rather than positive mental well-being. Although these outcomes are related, lower stress or anxiety

does not necessarily indicate higher positive mental well-being. The findings therefore offer relevant contextual evidence but do not provide a direct comparison of the outcome examined in the present study.

Bronfenbrenner's (1979) Ecological Systems Theory provides a framework for understanding how the school environment may relate to students' development. Classroom instruction and learning experiences form part of students' immediate educational environment. Self-Determination Theory (Ryan & Deci, 2000) also offers a useful explanation through its emphasis on competence, or the need to feel capable and effective. Students who understand their lessons may experience a greater sense of competence, whereas persistent difficulty understanding subjects may be associated with frustration and reduced confidence. The interview accounts illustrate these experiences, although they do not establish that teaching and learning conditions caused the reported feelings.

The present study provides evidence of a positive association between teaching and learning experiences and students' mental well-being. However, the correlational design cannot establish the direction of this relationship. While supportive teaching and successful learning experiences may contribute to positive feelings, students' existing mental well-being may also influence how they experience classroom learning.

LIMITATIONS OF THE STUDY

This study has several limitations. The cross-sectional design does not establish causality or determine the direction of the relationships between school climate and mental well-being. The study also relied on self-reported questionnaire responses, which may have been influenced by participants' perceptions and response tendencies. Measuring both constructs using the same questionnaire may have introduced common-method bias and influenced the observed relationships.

Although the questionnaire underwent expert review and pilot testing, exploratory or confirmatory factor analysis and statistical assessment of discriminant validity were not conducted. Possible construct overlap between school climate and mental well-being therefore remains uncertain. The sampling procedure, which involved selecting students who were willing to participate, may also have introduced selection bias and limited the representativeness of the sample. Finally, the study was conducted in participating public senior se- condary schools in Delta Central Senatorial District, Delta State. The findings may not be generalisable to private schools, other educational settings, or students in other geographical areas. These limitations should be considered when interpreting the findings and applying them beyond the study context.

CONCLUSION

The study found significant positive relationships between school safety, interpersonal relationships, teaching and learning, and mental well-being among public senior secondary school students in Delta Central Senatorial District. The qualitative findings complemented these results, highlighting how safety, supportive relationships, and positive learning experiences relate to students' emotional experiences and mental well-being. Although the findings do not establish causation, they highlight the relevance of school climate to students' mental well-being. Efforts to create safe and supportive learning environments may also support progress towards Sustainable Development Goal (SDG) 3, which focuses on good health and well-being, and SDG 4, which promotes quality education.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made:

1. School administrators should pay attention to students' experiences of safety by monitoring bullying, threats, and fighting and ensuring that reported incidents receive appropriate attention, given the observed positive relationship between school safety and mental well-being.

2. Teachers and school administrators should encourage respectful and supportive interactions among students and between teachers and students, considering the observed strong relationship between interpersonal relationships and students' mental well-being.

3. Teachers should pay attention to students' learning difficulties by providing clear explanations and appropriate academic support, given the observed positive relationship between teaching and learning experiences and mental well-being.

REFERENCES

1. Adewuya, A. O., Oladipo, O. E., & Esangbedo, A. (2026). School protective factors and adolescent mental health in Nigeria: An investigation of cumulative effects, buffering mechanisms, and gender differences. *BMC Psychology*, *14*, Article 399. https://doi.org/10.1186/s40359-026-04150-z
2. Aldridge, J. M., & McChesney, K. (2018). The relationships between school climate and adolescent mental health and wellbeing: A systematic literature review. *International Journal of Educational Research*, *88*, 121-145. https://doi.org/10.1016/j.ijer.2018.01.012
3. Awhangansi, S., Salisu, T., Awhangansi, O., Dadematthews, A., Abumere, E., Siddiq, B., Phillips, E., Mogan, M., Olushola, A., Archibong, A., Okewole, A., Adeosun, I., Sowunmi, O., Amosu, S., Lewis, M., Archard, P. J., Owoeye, O., & O'Reilly, M. (2025). Examining the role of bullying victimisation in predicting psychopathology among in-school Nigerian adolescents. *Journal of Forensic Practice*, *27*(2), 149-165. https://doi.org/10.1108/JFP-06-2024-0031
4. Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
5. Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227-268. https://doi.org/10.1207/S15327965PLI1104_01
6. Emike, E. A. (2026). Teachers' mental health awareness and self-efficacy, and students' emotional well-being in secondary schools in Lagos, Nigeria. *Gidan Madi Multi-Disciplinary Journal of Teacher Education*, *2*(2), 155-168. https://fcegmmdjte.org.ng/article/view/71
7. Imasuen, K., & Ighodaro, I. T. (2025). Exploring the impact of academic stress on junior secondary school students in Oredo Local Government Area, Edo State, Nigeria. *Benin Journal of Educational Studies*, *30*(1-2), 18-25. https://beninjes.com/index.php/bjes/article/view/146
8. Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior*, *43*(2), 207-222. https://doi.org/10.2307/3090197
9. Korpershoek, H., Harms, T., de Boer, H., van Kuijk, M., & Doolaard, S. (2016). A meta-analysis of the effects of classroom management strategies and classroom management programs on students' academic, behavioral, emotional, and motivational outcomes. *Review of Educational Research*, *86*(3), 643-680. https://doi.org/10.3102/0034654315626799
10. Kristensen, S. M., & Jeno, L. M. (2024). The developmental trajectories of teacher autonomy support and adolescent mental well-being and academic stress. *Social Psychology of Education*, *27*, 1-32. https://doi.org/10.1007/s11218-024-09923-1
11. Lester, L., & Cross, D. (2015). The relationship between school climate and mental and emotional wellbeing over the transition from primary to secondary school. *Psychology of Well-Being*, *5*, Article 9. https://doi.org/10.1186/s13612-015-0037-8
12. Leurent, B., Dodd, M., Allen, E., Viner, R., Scott, S., & Bonell, C. (2021). Is positive school climate associated with better adolescent mental health? Longitudinal study of young people in England. *SSM - Mental Health*, *1*, Article 100033. https://doi.org/10.1016/j.ssmmh.2021.100033
13. Odofin, T., & Igabari, Q. (2023). Assessment of mental health and examination anxiety of secondary school students in Delta Central Senatorial District, Delta State, Nigeria. *Rivers State University Journal of Education*, *26*(2), 168-174.
14. Reshu, Kumar, S., & Rathi, A. (2025). Adolescent academic stress and exam anxiety in schools in the wake of the COVID-19 pandemic. *Acta Psychologica*, *261*, Article 105820. https://doi.org/10.1016/j.actpsy.2025.105820

15. Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68-78. https://doi.org/10.1037/0003-066X.55.1.68
16. Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, *83*(3), 357-385. https://doi.org/10.3102/0034654313483907
17. United Nations. (n.d.-a). Goal 3: Ensure healthy lives and promote well-being for all at all ages. https://sdgs.un.org/goals/goal3
18. United Nations. (n.d.-b). Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. https://sdgs.un.org/goals/goal4
19. Wang, M.-T., & Degol, J. L. (2016). School climate: A review of the construct, measurement, and impact on student outcomes. *Educational Psychology Review*, *28*(2), 315-352. https://doi.org/10.1007/s10648-015-9319-1
20. Wang, M.-T., Degol, J. L., Amemiya, J., Parr, A., & Guo, J. (2020). Classroom climate and children's academic and psychological wellbeing: A systematic review and meta-analysis. *Developmental Review*, *57*, Article 100912. https://doi.org/10.1016/j.dr.2020.100912
21. World Health Organization. (2025, September 1). Mental health of adolescents. https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health
22. Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper & Row.