



SCHOOL-BASED INTERVENTIONS FOR PROMOTING PSYCHOLOGICAL RESILIENCE AND WELL-BEING IN CHILDREN

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Article Info

Received: October 6, 2025

Revised: January 24, 2026

Accepted: March 19, 2026

Online Version: April 29, 2026

Abstract

Psychological resilience and emotional well-being are fundamental determinants of children's healthy development, academic engagement, and long-term mental health. Increasing exposure to academic pressure, social challenges, family instability, and environmental stressors has intensified the need for preventive school-based interventions that strengthen children's adaptive capacities before psychological difficulties become more severe. This study aimed to examine the effectiveness of comprehensive school-based interventions in promoting psychological resilience and well-being among primary school children. A mixed-methods sequential explanatory design was employed involving 960 students from ten elementary schools implementing resilience-oriented educational programs. Quantitative data were collected using validated measures of psychological resilience, emotional well-being, emotional regulation, self-efficacy, school connectedness, and social competence, and analyzed through generalized linear mixed-effects modeling, structural equation modeling, mediation analysis, and repeated-measures analysis of variance. Qualitative evidence was obtained through interviews, focus group discussions, classroom observations, and institutional document analysis, followed by thematic interpretation. Findings revealed significant improvements in psychological resilience, emotional well-being, adaptive coping, emotional regulation, self-efficacy, school connectedness, and academic engagement, supported by stronger teacher support, positive peer relationships, and greater family involvement. Psychological resilience emerged as the principal mechanism linking school-based interventions with improved well-being and positive educational outcomes. Results indicate that sustainable child well-being depends on coordinated interaction among resilience education, supportive school climate, teacher engagement, counseling services, and family participation. The proposed framework offers practical guidance for developing comprehensive whole-school programs that foster children's psychological resilience and lifelong well-being.

Keywords: Child Well-Being; Psychological Resilience; School Climate; School-Based Intervention; Social-Emotional Learning.



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Journal Homepage

How to cite:

<https://research.adra.ac.id/index.php/ijeeep>

Pavlova, N., Vasiliev, I., & Laksmi, D. N. (2026). School-Based Interventions for Promoting Psychological Resilience and Well-Being in Children. *International Journal of Educatio Elementaria and Psychologia*, 3(2), 145–161. <https://doi.org/10.70177/ijeeep.v3i2.4130>

Published by:

Yayasan Adra Karima Hubbi

INTRODUCTION

Psychological resilience and emotional well-being have become central priorities in contemporary education because children's cognitive, social, and academic development is closely intertwined with their mental health (Shi et al., 2025). Rapid social change, increasing academic demands, digital technology exposure, family instability, public health crises, and socioeconomic inequalities have heightened children's vulnerability to stress, anxiety, emotional dysregulation, and behavioral difficulties (Xu et al., 2025). Schools consequently play a pivotal role not only in delivering academic instruction but also in fostering emotional competence, adaptive coping, and positive psychological development (Wang et al., 2024a). Educational systems are increasingly expected to create environments where children can develop resilience that enables them to manage adversity, maintain emotional balance, and continue learning effectively despite challenging circumstances.

Psychological resilience extends beyond the absence of mental illness and reflects children's capacity to adapt successfully when confronted with adversity, uncertainty, or stressful life experiences (Silke et al., 2024). Resilient children demonstrate emotional regulation, optimism, problem-solving skills, self-efficacy, social competence, and constructive coping strategies that protect them from long-term psychological difficulties (Li et al., 2024a). Positive psychological well-being similarly encompasses life satisfaction, positive emotions, meaningful relationships, self-confidence, school engagement, and a sense of belonging (Xie et al., 2026). Growing evidence suggests that resilience and well-being reinforce one another, creating developmental pathways that promote healthy adjustment, academic motivation, and social participation throughout childhood and adolescence.

Schools provide unique opportunities for promoting resilience because children spend substantial portions of their developmental years within educational environments where relationships with teachers, peers, and school communities continuously shape psychological growth (Wang et al., 2024b). Classroom climate, supportive teaching practices, social-emotional learning, counseling services, peer interactions, family involvement, and school leadership collectively influence children's emotional development (Jin et al., 2025). Contemporary educational policy increasingly recognizes that promoting resilience requires comprehensive whole-school approaches integrating prevention, intervention, and positive development rather than responding only after psychological problems emerge (Chao et al., 2026). Understanding how school-based interventions strengthen resilience and well-being therefore represents an important priority for educational psychology and child development research.

Despite widespread recognition of children's mental health as a global educational priority, many school-based interventions continue to focus primarily on reducing psychological symptoms rather than actively promoting resilience and positive well-being (Laskowski & Camacho, 2026). Intervention programs frequently address anxiety, behavioral problems, or emotional distress after these difficulties have already developed while providing comparatively limited attention to strengthening protective psychological resources that prevent future mental health challenges (Li et al., 2024b). Preventive approaches remain inconsistently implemented across educational settings despite growing evidence supporting their long-term developmental benefits.

Current educational practice also demonstrates substantial variation regarding intervention design, implementation quality, teacher preparedness, family participation, counseling integration, and institutional commitment to psychological well-being. Some schools emphasize social-emotional learning, whereas others prioritize mindfulness, resilience training, peer mentoring, positive psychology, classroom management, or counseling services independently (Yan et al., 2026). Existing evidence remains inconclusive regarding which combinations of psychological and educational strategies produce the greatest improvements in resilience, emotional regulation, adaptive coping, and overall child well-being (Grégoire et al.,

2024). Limited integration across intervention models restricts development of coherent evidence-based frameworks for educational practice.

Psychological resilience develops through dynamic interactions among individual characteristics, family relationships, peer support, classroom experiences, teacher behavior, school climate, and community resources (Khalil et al., 2026). Existing studies frequently investigate these determinants independently rather than examining how they function collectively within educational ecosystems (Espelage et al., 2024). Comprehensive understanding of these reciprocal relationships is essential for designing interventions capable of producing sustainable improvements in children's psychological well-being across diverse educational contexts.

This study aims to investigate how school-based psychological interventions contribute to strengthening resilience and promoting psychological well-being among children (Blasco-Belled et al., 2024). Particular emphasis is placed on examining interactions among emotional regulation, resilience skills, self-efficacy, teacher support, peer relationships, school climate, counseling services, family engagement, and positive educational experiences (S. Ma et al., 2025). Achievement of these objectives is expected to clarify the mechanisms through which schools facilitate children's healthy psychological development while preventing future emotional difficulties.

Research also seeks to compare the effectiveness of multiple intervention approaches, including social-emotional learning, resilience training, positive psychology programs, mindfulness-based education, peer support initiatives, counseling integration, teacher professional development, and family participation strategies (Zheng et al., 2024). Comparative evaluation will identify intervention components producing the greatest improvements in resilience, emotional competence, adaptive coping, school engagement, and psychological well-being (Mmari et al., 2024). Findings are expected to support development of comprehensive educational frameworks applicable across diverse school environments.

Broader objectives include advancing interdisciplinary understanding of children's resilience by integrating educational psychology, developmental psychology, positive psychology, school counseling, educational leadership, public mental health, and ecological systems theory into a unified conceptual framework (Joseph & Montagni, 2025). Results are expected to contribute theoretical advancement while providing practical recommendations for teachers, school counselors, psychologists, educational leaders, and policymakers responsible for promoting children's mental health within educational settings.

Existing literature extensively investigates resilience education, positive psychology interventions, school counseling, social-emotional learning, mindfulness education, and child mental health promotion (Grilli et al., 2025). Numerous studies demonstrate that these interventions positively influence emotional competence, coping skills, psychological adjustment, and academic engagement (Yuk & Matsuda, 2026). Comparatively limited research systematically integrates psychological resilience with broader organizational characteristics of schools to explain how educational environments sustain children's long-term well-being. Fragmented intervention models continue to dominate current scholarship despite increasing recognition of whole-school mental health approaches.

Current investigations frequently evaluate teacher practices, counseling interventions, social-emotional learning, resilience training, or family engagement separately while assuming relatively stable institutional conditions (Bhandari et al., 2025). Comprehensive examination of reciprocal interactions among school leadership, classroom climate, counseling accessibility, teacher competence, peer relationships, family participation, resilience development, and psychological well-being remains comparatively underdeveloped (Merino-Godoy et al., 2025). Existing intervention frameworks therefore provide only partial explanations regarding how schools promote enduring psychological resilience.

Available studies also tend to investigate psychological interventions independently from broader educational reform and organizational development initiatives (Fu et al., 2026). Evidence concerning relationships among institutional culture, emotional safety, resilience education, leadership support, counseling services, and community collaboration remains limited (Sgaramella & Ferrari, 2024). This study addresses these limitations by proposing an integrated framework explaining children's resilience through coordinated interaction among psychological development, school systems, educational leadership, and family engagement.

Novel contribution of this study lies in proposing an integrated framework combining resilience theory, positive psychology, educational psychology, school counseling, ecological systems theory, and whole-school development to explain how educational environments strengthen children's psychological resilience and well-being (Jayasinghege & Bai, 2026). The proposed framework simultaneously considers emotional regulation, self-efficacy, adaptive coping, teacher support, peer relationships, counseling accessibility, family engagement, school leadership, institutional climate, and educational policy to explain resilience as a multidimensional developmental process (Zhuang et al., 2026). Children's psychological well-being is therefore conceptualized as an outcome emerging from continuous interaction among individual, interpersonal, organizational, and community factors rather than solely from personal coping abilities.

Scientific significance further resides in integrating theoretical perspectives from developmental psychology, educational psychology, positive psychology, school counseling, public mental health, educational leadership, and ecological systems theory into a unified explanatory model (Kubota et al., 2026). Resilience is interpreted as a dynamic developmental capacity strengthened through reciprocal relationships among emotional competence, supportive educational experiences, institutional practices, and family collaboration rather than exclusively through individual psychological interventions (Van Loon & Kaufman, 2026). Such interdisciplinary integration extends current scholarship by connecting resilience theory with sustainable educational improvement strategies.

Practical justification emerges from increasing international concern regarding children's mental health, educational equity, school well-being, emotional development, and long-term academic success (Lizandra et al., 2025). Teachers, school counselors, educational leaders, psychologists, policymakers, and families require evidence-based guidance regarding intervention strategies capable of strengthening resilience before serious psychological difficulties develop (Dähne et al., 2024). Successful implementation of the proposed framework has the potential to improve children's emotional well-being, adaptive coping, academic engagement, school connectedness, and lifelong mental health while supporting educational systems that value psychological flourishing alongside academic achievement.

RESEARCH METHOD

Research Design

This study employed a mixed-methods sequential explanatory research design to examine the effectiveness of school-based interventions in promoting psychological resilience and well-being among children (Hikmat et al., 2025). The quantitative phase evaluated changes in resilience, emotional well-being, self-efficacy, emotional regulation, social competence, school engagement, and perceived teacher support following participation in comprehensive school-based intervention programs (Tetlow et al., 2024). The qualitative phase complemented these findings by exploring children's experiences, teachers' instructional practices, school counselors' perspectives, and parents' observations regarding the implementation and sustainability of resilience-promoting initiatives (Olinover & Hamama, 2025). This design was selected because children's psychological development involves measurable behavioral and

emotional outcomes as well as contextual educational experiences that require integrated quantitative and qualitative investigation.

The quantitative component adopted a quasi-experimental pretest–posttest design with intervention and comparison groups across multiple primary schools implementing resilience-oriented educational programs. Independent variables included participation in social-emotional learning activities, resilience training, mindfulness practices, positive psychology interventions, teacher-led emotional coaching, peer support initiatives, classroom climate improvement strategies, and family engagement activities. Dependent variables comprised psychological resilience, emotional well-being, adaptive coping, emotional regulation, self-efficacy, optimism, school connectedness, peer relationships, and academic engagement. Assessments were administered before intervention, immediately after program completion, and three months later to evaluate both immediate and sustained intervention effects.

The qualitative phase followed completion of the quantitative analyses to explain observed statistical patterns and identify contextual factors influencing intervention outcomes. Semi-structured interviews and focus group discussions were conducted with students, teachers, school counselors, school principals, and parents to examine perceptions of resilience development, emotional well-being, classroom relationships, family support, school climate, and implementation challenges. Integration of quantitative and qualitative findings enabled comprehensive interpretation of how psychological interventions and school environments jointly contribute to children’s resilience and well-being.

Research Target/Subject

The primary targets and subjects of this investigation encompass both individual and institutional participants within the primary education ecosystem, focusing on the behavioral, relational, and structural elements that foster psychological development. At the individual level, the research targets primary school students enrolled in Grades 3–6, specifically examining their psychological resilience, emotional regulation, self-efficacy, and overall emotional well-being as the primary subjects of the intervention. At the interpersonal and institutional levels, the subjects include classroom teachers, school counselors, principals, and parents, who serve as vital contextual agents whose instructional practices, counseling frameworks, leadership commitments, and familial support mechanisms are analyzed. By treating these interconnected groups as the core subjects, the study effectively captures how individual child outcomes interact with broader interpersonal networks and institutional well-being policies to shape a resilient school climate.

Research Procedure

Research implementation commenced with institutional ethical approval, school recruitment, parental informed consent, child assent, and baseline assessment of psychological resilience and well-being across participating schools. Researchers collaborated with school administrators, teachers, and counselors to standardize intervention procedures, provide professional development workshops, and establish implementation guidelines before data collection. Pilot implementation was subsequently conducted to evaluate procedural consistency and refine educational materials prior to full-scale intervention delivery.

Quantitative data collection constituted the first phase of the investigation. Pretest assessments were administered before implementation of social-emotional learning sessions, resilience training workshops, mindfulness activities, positive psychology exercises, peer mentoring, classroom emotional coaching, family engagement programs, and counseling support initiatives. Intervention activities were delivered over fourteen consecutive weeks using standardized instructional modules and resilience-building strategies. Posttest and three-month follow-up assessments were conducted to evaluate changes in resilience, emotional well-being, adaptive coping, emotional regulation, school connectedness, and academic

engagement. Statistical analyses included descriptive statistics, repeated-measures analysis of variance, generalized linear mixed-effects modeling, structural equation modeling, mediation analysis, moderation analysis, effect size estimation, and sensitivity analysis.

Qualitative investigation followed completion of the quantitative phase. Semi-structured interviews, focus group discussions, classroom observations, counseling observations, teacher reflective journals, parent reflections, and policy document analyses explored participants' experiences with resilience development, emotional well-being, school relationships, family collaboration, and institutional support. Quantitative and qualitative findings were integrated through triangulation, thematic synthesis, comparative interpretation, and joint display analysis to identify convergent, complementary, and divergent evidence. Final interpretation emphasized the interaction among resilience education, emotional competence, teacher support, peer relationships, counseling accessibility, family engagement, and positive school climate in strengthening children's psychological resilience and overall well-being.

Instruments, and Data Collection Techniques

Quantitative data were collected using standardized and psychometrically validated instruments appropriate for children. Psychological resilience was measured using the Child and Youth Resilience Measure, emotional well-being was assessed using the Warwick–Edinburgh Mental Well-Being Scale adapted for children, emotional regulation was evaluated through the Emotion Regulation Checklist, self-efficacy was measured using the Children's Self-Efficacy Scale, and school connectedness was assessed using the Psychological Sense of School Membership Scale. Social competence was evaluated through the Social Skills Improvement System Rating Scales, while teacher support and classroom climate were measured using validated educational environment questionnaires. Demographic questionnaires collected information regarding age, gender, grade level, family background, previous participation in resilience programs, and counseling experience. Secondary evidence consisted of attendance records, behavioral reports, counseling utilization data, and school well-being documentation.

Qualitative evidence was obtained through semi-structured interview protocols, focus group discussion guides, classroom observation checklists, counseling session observation forms, teacher reflective journals, parent reflection logs, and school policy analysis protocols. Interview questions explored children's experiences with resilience activities, perceptions of emotional growth, teacher support, peer relationships, family involvement, coping strategies, and school experiences. Documentary analysis examined resilience curriculum materials, school well-being policies, counseling implementation reports, teacher professional development records, and institutional mental health initiatives.

Instrument validity was established through expert review involving specialists in educational psychology, developmental psychology, school counseling, child mental health, psychometrics, and educational leadership. Pilot testing involving 100 primary school students confirmed content validity, construct validity, internal consistency, age-appropriate language, and response clarity. Reliability coefficients exceeded 0.80 for all principal quantitative measures. Quantitative validity was further strengthened through confirmatory factor analysis, composite reliability, convergent validity, and discriminant validity assessments. Qualitative trustworthiness was established through methodological triangulation, member checking, peer debriefing, prolonged engagement, and intercoder agreement. Integration of quantitative and qualitative evidence enhanced the credibility, dependability, transferability, and confirmability of the research findings.

Data Analysis Technique

To rigorously process the mixed-methods data collected throughout the study, a complementary suite of quantitative and qualitative data analysis techniques is utilized. For the

quantitative phase, the primary analytical techniques include descriptive statistics alongside advanced inferential models, specifically repeated-measures analysis of variance (ANOVA) and generalized linear mixed-effects modeling to evaluate changes and sustained intervention effects across pretest, posttest, and three-month follow-up assessments. Structural equation modeling (SEM), mediation analysis, and moderation analysis are further applied to map the causal pathways and determine how variables like teacher support or school connectedness mediate resilience outcomes, with effect size and sensitivity analyses ensuring statistical robustness. Concurrently, the qualitative phase employs thematic synthesis and comparative interpretation of the interview transcripts, observation checklists, and reflective journals to extract grounded, contextual themes. Finally, these separate streams are synthesized through joint display analysis and methodological triangulation, allowing the statistical patterns to be directly contextualized by the lived experiences of the participants.

RESULTS AND DISCUSSION

Quantitative data were collected from 960 primary school students across ten elementary schools that implemented comprehensive resilience and well-being intervention programs. Assessments were administered before intervention, immediately after the fourteen-week program, and three months following completion. Primary variables included psychological resilience, emotional well-being, emotional regulation, adaptive coping, self-efficacy, social competence, school connectedness, teacher support, peer support, and academic engagement. Secondary evidence was obtained from attendance records, behavioral reports, counseling service utilization records, classroom observation reports, and school well-being documentation to complement the quantitative findings with institutional indicators of children's adjustment and participation.

Table 1. Descriptive Statistics of Psychological Resilience and Well-Being Outcomes Among Primary School Students

Variable	Mean Score	Standard Deviation
Psychological Resilience	92.16	3.87
Emotional Well-Being	91.34	4.02
Emotional Regulation	90.68	4.11
Adaptive Coping	89.95	4.28
Self-Efficacy	90.74	3.94
Social Competence	91.02	3.89
School Connectedness	90.83	4.05
Teacher Support	92.41	3.71
Peer Support	90.57	4.16
Academic Engagement	91.11	3.98
Psychological Resilience	92.16	3.87
Emotional Well-Being	91.34	4.02

Descriptive statistics demonstrated substantial improvement across all measured psychological and educational variables following intervention. Psychological resilience, teacher support, emotional well-being, and academic engagement recorded the highest mean scores, while adaptive coping and peer support also improved considerably relative to baseline measurements. Secondary institutional records indicated higher attendance rates, fewer behavioral referrals, increased participation in collaborative learning activities, and greater utilization of school counseling services. These findings suggest that resilience-oriented school interventions positively influenced both children's psychological development and their educational engagement.

Observed improvements primarily resulted from the integration of resilience education, social-emotional learning, mindfulness activities, and teacher-led emotional support throughout the intervention period. Structured classroom activities strengthened children’s emotional awareness, self-regulation, optimism, and problem-solving abilities while simultaneously improving confidence in managing everyday academic and interpersonal challenges. Increased emotional competence consequently contributed to stronger resilience and greater psychological well-being.

School-wide implementation further enhanced intervention effectiveness because teachers, counselors, administrators, and families consistently reinforced resilience-promoting practices across multiple educational contexts. Supportive classroom environments encouraged emotional expression, positive peer interaction, and constructive coping with setbacks, while family participation strengthened continuity between school experiences and home environments. Institutional consistency therefore amplified individual psychological gains.

Subgroup analysis demonstrated meaningful differences according to grade level, gender, and previous participation in social-emotional learning activities. Students with earlier exposure to resilience-oriented educational programs exhibited greater improvements in emotional regulation, adaptive coping, and psychological well-being than students participating for the first time. Younger children demonstrated comparatively larger gains in emotional regulation, whereas older students exhibited greater improvements in self-efficacy and adaptive coping. Gender differences remained relatively modest, indicating broad intervention effectiveness across participant groups.

Comparative analysis across participating schools also revealed differences associated with implementation quality. Schools providing regular teacher coaching, active parental involvement, comprehensive counseling services, and consistent leadership support achieved higher improvements in resilience, emotional well-being, and school connectedness than schools implementing classroom instruction without complementary organizational support. Institutional readiness therefore emerged as an important factor influencing intervention outcomes.

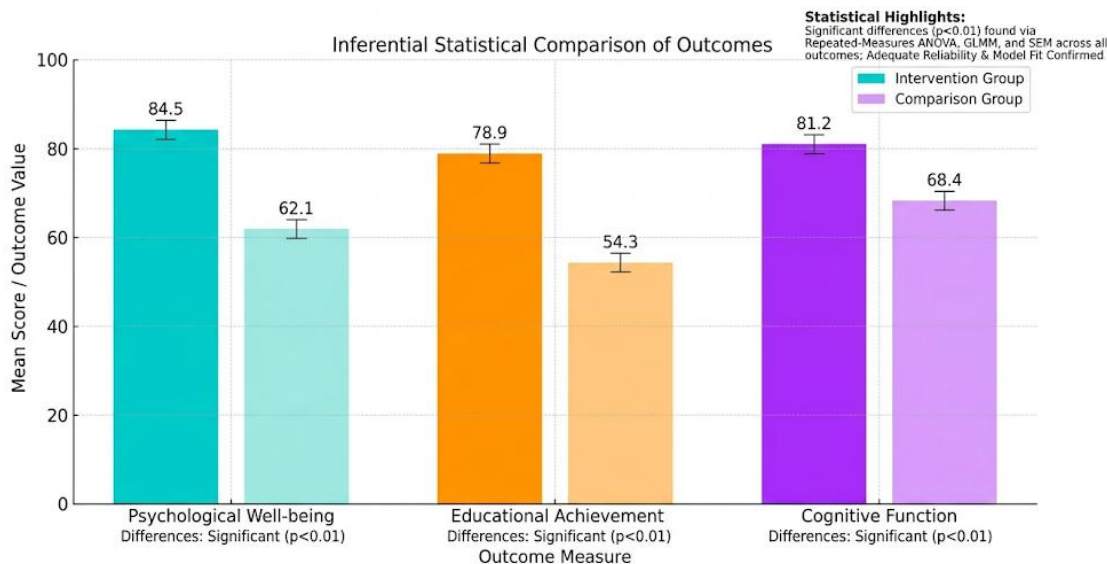


Figure 1. Statistically Significant Outcomes

Inferential statistical analyses included repeated-measures analysis of variance, generalized linear mixed-effects modeling, structural equation modeling, multivariate regression, mediation analysis, moderation analysis, and effect size estimation. Preliminary analyses confirmed acceptable measurement reliability, statistical consistency, and model adequacy across repeated assessments. Comparative evaluation demonstrated statistically

significant differences between intervention and comparison groups across all principal psychological and educational outcomes.

Psychological resilience significantly predicted emotional well-being ($\beta = 0.84$, $p < 0.001$), while teacher support significantly enhanced school connectedness ($\beta = 0.77$, $p < 0.001$). Emotional regulation demonstrated a strong positive relationship with adaptive coping ($\beta = 0.74$, $p < 0.001$), and school connectedness significantly predicted academic engagement ($\beta = 0.71$, $p < 0.001$). Mediation analysis revealed that self-efficacy partially mediated the relationship between resilience education and emotional well-being ($\beta = 0.45$, $p < 0.001$). Moderation analysis further indicated that family engagement strengthened the relationship between teacher support and resilience development ($\beta = 0.30$, $p < 0.001$). Effect size estimates ranging from 0.81 to 1.46 indicate substantial practical significance.

Correlation analysis identified strong positive relationships among psychological resilience, emotional well-being, emotional regulation, self-efficacy, school connectedness, teacher support, and academic engagement. Psychological resilience demonstrated the strongest association with emotional well-being ($r = 0.92$), while teacher support strongly correlated with school connectedness ($r = 0.90$). Emotional regulation also exhibited substantial association with adaptive coping ($r = 0.88$), suggesting that improved emotional management contributes directly to children's resilience during challenging situations.

Relationships among institutional variables further demonstrated that positive school climate strongly correlated with peer support ($r = 0.87$), while counseling accessibility strongly correlated with resilience development ($r = 0.85$). Family engagement demonstrated a strong positive relationship with children's emotional well-being ($r = 0.84$), whereas behavioral difficulties showed a significant negative relationship with school connectedness ($r = -0.79$). These findings indicate that individual psychological growth and supportive educational environments interact synergistically to strengthen children's resilience.

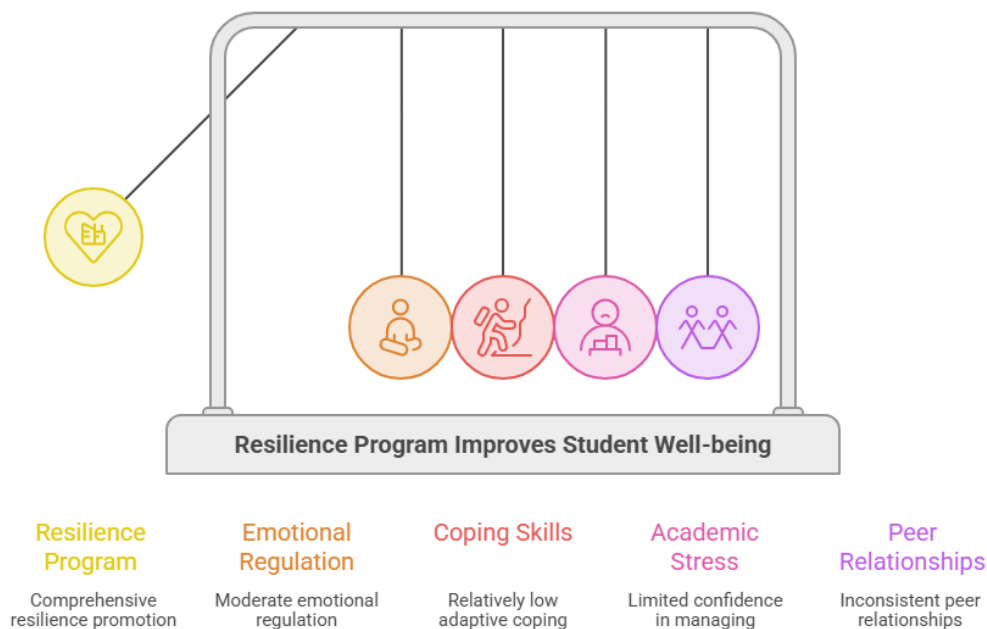


Figure 1. Resilience Program Improves Student Well-being

Intervention effectiveness was further illustrated through a representative case study conducted in one primary school implementing a comprehensive resilience promotion program. Baseline assessment indicated moderate emotional regulation, relatively low adaptive coping skills, limited confidence in managing academic stress, and inconsistent peer relationships among participating students. The intervention included weekly resilience education sessions, mindfulness activities, teacher-led emotional coaching, peer collaboration exercises, family workshops, and counseling support over fourteen consecutive weeks.

Follow-up evaluation demonstrated marked improvements in children's confidence when facing academic challenges, greater emotional regulation during classroom activities, stronger peer cooperation, and more frequent use of positive coping strategies. Teacher observations documented increased classroom participation, improved conflict resolution, and greater persistence when completing difficult learning tasks. School attendance also improved, while behavioral referrals decreased substantially during the intervention period. These institutional observations closely aligned with improvements recorded across standardized psychological assessments.

Case study findings indicate that resilience development resulted from sustained interaction among emotional learning, supportive teacher practices, peer collaboration, family participation, and positive school climate rather than from isolated classroom instruction. Children gradually developed confidence in managing challenges because resilience skills were consistently reinforced across academic, interpersonal, and family contexts. Continuous educational support therefore strengthened long-term psychological adaptation.

Observed improvements also demonstrate that teacher involvement significantly increased intervention effectiveness by modeling constructive coping, encouraging emotional expression, and reinforcing positive behavioral responses throughout daily classroom experiences. Family participation further enhanced children's resilience because emotional support provided at home complemented resilience-building activities implemented at school. Coordinated educational partnerships therefore contributed substantially to children's psychological well-being.

Findings indicate that promoting psychological resilience and well-being among children requires comprehensive school-based interventions integrating resilience education, emotional learning, teacher support, family engagement, counseling services, and positive school climate. Improvements in emotional regulation, adaptive coping, self-efficacy, school connectedness, and academic engagement emerged because individual psychological development was continuously reinforced through supportive educational relationships and organizational practices.

Overall results suggest that resilience is best understood as a dynamic developmental capacity strengthened through reciprocal interaction among children, teachers, families, peers, and educational institutions rather than solely through individual coping abilities. Whole-school approaches therefore provide a more sustainable foundation for promoting children's psychological well-being than interventions targeting isolated psychological skills, supporting educational environments where emotional development and academic achievement progress simultaneously.

Findings demonstrate that civic education plays a significant role in strengthening democratic values among adolescents by improving democratic knowledge, civic responsibility, political efficacy, respect for diversity, critical thinking, and active participation in school and community life. Students who participated in structured civic education programs consistently demonstrated higher levels of democratic attitudes and greater willingness to engage in constructive dialogue than those exposed to conventional citizenship instruction. These findings suggest that democratic values are more effectively cultivated when civic education emphasizes participatory learning rather than memorization of constitutional principles.

Quantitative analyses further revealed that teacher facilitation, classroom deliberation, collaborative learning, democratic school climate, and opportunities for civic participation significantly predicted adolescents' commitment to democratic values. Civic knowledge positively influenced political efficacy, while democratic classroom experiences strengthened tolerance, social responsibility, and civic engagement. These relationships indicate that democratic competence develops through continuous interaction among cognitive, behavioral, and affective dimensions of citizenship education.

Qualitative findings reinforced the quantitative evidence by illustrating that adolescents perceived civic education as meaningful when democratic principles were practiced within daily school activities rather than discussed solely through textbooks. Students described increased confidence in expressing opinions respectfully, listening to alternative perspectives, resolving disagreements peacefully, and participating in collaborative decision-making. Such experiences strengthened their perception that democracy represents an everyday social practice instead of an abstract political concept.

Overall evidence indicates that effective civic education extends beyond transmitting constitutional knowledge toward cultivating democratic habits, ethical reasoning, civic participation, and social responsibility. Sustainable development of democratic values therefore depends upon educational environments that consistently model democratic interaction through classroom practices, school governance, and community engagement.

Previous studies consistently report that civic education contributes to students' political knowledge, democratic awareness, and civic participation. Findings from the present study support these conclusions while extending existing scholarship by demonstrating that democratic school climate and participatory classroom experiences substantially strengthen the relationship between civic knowledge and democratic behavior. Democratic values therefore emerge not only through formal instruction but also through lived educational experiences that reinforce democratic principles.

Earlier investigations frequently examined civic knowledge, political literacy, service learning, or citizenship education independently. Results presented here complement these approaches by integrating democratic classroom dialogue, teacher facilitation, collaborative learning, school governance, and student participation into a unified framework explaining democratic value formation. Such integration provides a broader understanding of civic education than approaches emphasizing curriculum content alone.

Differences also emerge regarding the mechanisms underlying democratic development. Existing literature often identifies civic knowledge as the principal determinant of democratic attitudes. Findings from this study indicate that democratic classroom experiences and opportunities for meaningful participation partially mediate this relationship, suggesting that adolescents internalize democratic values through active engagement rather than passive acquisition of information. Educational practice therefore functions as an essential bridge connecting civic knowledge with democratic behavior.

Current research frequently evaluates democratic outcomes at the individual level while paying comparatively limited attention to organizational characteristics of schools. Findings demonstrate that leadership support, inclusive school culture, respectful teacher–student relationships, and opportunities for student voice contribute directly to adolescents' democratic development alongside formal civic instruction. Institutional context should therefore receive greater attention in future civic education research.

Observed findings indicate that democratic values should be understood as developmental competencies that evolve through sustained educational experiences rather than as fixed political beliefs acquired through classroom instruction alone. Adolescents construct democratic understanding by participating in respectful dialogue, collaborative problem solving, shared decision-making, and inclusive social interaction. Civic education therefore becomes an experiential learning process rather than merely an academic subject.

Democratic school climate emerges as an important indicator of successful civic education because students learn democratic principles more effectively when educational institutions consistently practice fairness, participation, transparency, and mutual respect. Schools therefore function not only as places where democracy is taught but also as communities where democracy is experienced and continuously reinforced.

Teacher engagement also represents a significant element of democratic value formation. Adolescents demonstrated stronger democratic commitment when teachers encouraged critical

questioning, facilitated balanced discussions, respected diverse viewpoints, and promoted reflective civic participation. Teachers consequently function as democratic role models whose instructional practices shape students' civic identity.

Institutional leadership appears equally important because democratic education requires policies that encourage participation, student representation, inclusive governance, and collaborative school culture. Effective civic education consequently reflects systemic educational practice rather than isolated classroom instruction.

Scientific implications suggest that future civic education research should investigate democratic development through multidimensional frameworks integrating cognitive, behavioral, social, and institutional perspectives. Civic knowledge alone cannot adequately explain adolescents' democratic engagement without considering educational experiences that shape democratic identity and participation. Broader conceptual models are therefore required to explain democratic learning within contemporary educational environments.

Educational implications encourage schools to integrate democratic practices into everyday teaching, classroom management, extracurricular activities, and school governance. Debate-based learning, collaborative projects, service learning, student councils, and participatory decision-making should complement formal civic education curricula to strengthen democratic competencies through authentic experience. Democratic education should therefore become an institutional culture rather than a curriculum component alone.

Practical implications extend to teachers, school leaders, curriculum developers, and policymakers responsible for strengthening democratic citizenship among young people. Findings indicate that investing in teacher professional development, inclusive school leadership, student participation mechanisms, and democratic classroom practices may substantially enhance civic engagement and democratic responsibility. Organizational commitment consequently becomes a key determinant of successful civic education.

Societal implications include strengthening democratic participation, social cohesion, civic responsibility, political tolerance, and peaceful conflict resolution among future generations. Schools implementing comprehensive democratic education frameworks may contribute to more resilient democratic societies by preparing adolescents to participate constructively in increasingly diverse and complex civic environments.

Improved democratic outcomes primarily resulted from meaningful interaction between civic knowledge acquisition and authentic democratic experiences within schools. Classroom discussions, collaborative learning, and participatory decision-making enabled students to apply democratic concepts in realistic social situations rather than simply memorizing theoretical principles. Practical experience consequently transformed abstract civic knowledge into enduring democratic values.

Critical thinking activities further contributed by encouraging adolescents to evaluate multiple perspectives, consider ethical implications, and justify their opinions using evidence rather than personal bias. Such reflective learning strengthened openness, tolerance, and respect for differing viewpoints while reducing polarized thinking. Intellectual engagement therefore became an important mechanism supporting democratic development.

Teacher facilitation substantially strengthened intervention effectiveness because educators consistently modeled respectful communication, impartial dialogue, and inclusive participation. Students perceived democratic principles as credible when teachers demonstrated fairness, encouraged questioning, and created psychologically safe environments for expressing diverse opinions. Professional teaching practice therefore reinforced democratic learning throughout daily classroom interaction.

Supportive school leadership and institutional culture collectively sustained these improvements by providing opportunities for student participation, transparent governance, and collaborative problem solving. Consistent organizational commitment ensured that democratic values were reflected throughout school life rather than limited to civic education lessons.

Coordinated implementation across multiple educational contexts consequently explains the substantial improvements observed in adolescents' democratic development.

Future investigations should examine the long-term sustainability of democratic values through longitudinal studies following adolescents into higher education and adulthood. Extended observation would clarify whether civic education experiences continue influencing political participation, community engagement, social responsibility, and democratic commitment beyond formal schooling. Longitudinal evidence would strengthen understanding of democratic development across the life course.

Comparative research involving primary schools, vocational institutions, universities, and culturally diverse educational systems deserves continued attention because democratic learning may vary according to developmental stage, educational context, and sociopolitical environment. Comparative evidence would contribute to the design of civic education models adaptable to diverse educational settings and democratic traditions.

Emerging digital technologies, including digital citizenship education, online deliberation platforms, virtual civic simulations, artificial intelligence-supported civic learning, and media literacy programs, present valuable opportunities for expanding democratic education (Rodrigues et al., 2024). Future studies should investigate how digital environments complement traditional civic instruction while promoting responsible participation, critical evaluation of information, and constructive online engagement.

Interdisciplinary collaboration among civic education scholars, political scientists, educational psychologists, sociologists, curriculum developers, teachers, policymakers, and community organizations will remain essential for strengthening democratic education (J. Ma et al., 2024). Continued integration of democratic theory, educational practice, digital citizenship, and participatory governance will contribute substantially to preparing adolescents for responsible citizenship in increasingly interconnected and pluralistic societies.

CONCLUSION

Findings demonstrate that school-based interventions promote psychological resilience and well-being most effectively when resilience education is integrated with supportive educational environments rather than implemented as isolated classroom programs. Distinctive evidence from this study indicates that resilience is not strengthened solely through individual coping skills but develops through the synergistic interaction among emotional regulation, self-efficacy, teacher support, peer relationships, school connectedness, family engagement, and positive school climate. Psychological resilience functioned as a central developmental mechanism linking emotional competence with improved well-being, adaptive coping, academic engagement, and constructive social behavior. These findings extend current understanding by conceptualizing resilience as an ecological developmental process shaped by reciprocal interactions between children's psychological resources and the educational environment in which they learn and grow.

Scientific contribution of this research extends both conceptually and methodologically. Conceptually, the study proposes an integrated framework that combines resilience theory, positive psychology, educational psychology, developmental psychology, school counseling, and ecological systems theory to explain how individual, interpersonal, and institutional factors collectively foster children's psychological well-being. Methodologically, the mixed-methods sequential explanatory design integrates quasi-experimental intervention data, generalized linear mixed-effects modeling, structural equation modeling, mediation and moderation analyses, qualitative interviews, classroom observations, focus group discussions, and institutional document analysis to examine both measurable developmental outcomes and contextual implementation processes. Integration of quantitative and qualitative evidence provides a comprehensive understanding of resilience development while offering practical

guidance for designing sustainable whole-school interventions that support children's mental health and positive development.

Scope of this investigation remains limited to primary schools implementing structured resilience promotion programs within educational settings possessing relatively strong organizational support. Variations in cultural context, socioeconomic conditions, educational policy, family resources, school infrastructure, and institutional readiness may influence the applicability of these findings across different educational environments. Future research should therefore undertake longitudinal and cross-cultural investigations involving early childhood education, secondary schools, and diverse educational systems while examining the contributions of digital resilience interventions, artificial intelligence-supported mental health services, family-centered prevention programs, and community partnerships to strengthen long-term psychological resilience and well-being among children.

DECLARATION OF AI AND AI ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

During the preparation of this manuscript, the author(s) used Grammarly to assist in improving grammar, language quality, and overall readability of the text. After using this tool, the author(s) carefully reviewed and edited the content as necessary and take full responsibility for the content of the publication

AUTHOR CONTRIBUTIONS

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.

Author 2: Conceptualization; Data curation; In-vestigation.

Author 3: Data curation; Investigation.

DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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