

Digital Transformation and Adolescent Mental Health: Rethinking School-Based Counseling Systems in Vietnamese High Schools

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ABSTRACT

The intensification of academic competition and digital immersion has heightened psychosocial vulnerability among adolescents in contemporary educational contexts. This study investigates the prevalence of psychosocial stressors and evaluates the institutional readiness of school-based counseling services in Vietnamese high schools. A convergent parallel mixed-methods design was implemented in four public high schools in Long Xuyen city, An Giang Province. Quantitative data from 528 students measured academic stress, digital stress exposure, emotional distress, help-seeking intention, and perceived necessity of counseling (Cronbach's $\alpha = .87$). Qualitative data were obtained through 16 student focus groups, 48 semi-structured interviews with teachers and administrators, non-participant observations, and document analysis.

Results reveal substantial psychosocial strain: 76% of students reported moderate-to-high academic stress, 64% experienced examination-related anxiety, 58% reported online comparison stress, and 41% indicated exposure to cyberbullying. Digital stress exposure demonstrated a significant positive association with anxiety symptoms ($r = .52, p < .01$). Notably, 82% of students perceived professional counseling services as necessary or very necessary. Thematic analysis identified four interconnected domains: academic-identity pressure convergence, digital amplification of distress, confidentiality and trust deficits, and professional capacity limitations.

Findings indicate a structural mismatch between escalating adolescent mental health needs and existing counseling capacity. Strengthening school-based psychological services requires competency-based professionalization, institutional investment, digital mental health integration, and policy anchoring to ensure systemic alignment with the psychosocial demands of the digital era.

Keywords: adolescent mental health; digital stress; school-based counseling; academic pressure; mixed methods research; Vietnam.

INTRODUCTION

Adolescence (ages 15–18) represents a critical developmental phase characterized by identity consolidation, heightened socio-emotional sensitivity, and high-stakes academic decision-making. Within Erikson's (1968) framework of identity versus role confusion, successful identity integration fosters resilience, whereas unresolved identity diffusion increases vulnerability to internalizing disorders. Neurodevelopmental evidence further demonstrates asynchronous maturation between limbic reward systems and prefrontal executive control networks, intensifying susceptibility to peer evaluation, affective reactivity, and risk-taking (Casey, Jones, & Hare, 2008; Steinberg, 2014). In performance-driven school contexts, these developmental dynamics may manifest as elevated stress, anxiety, and identity-related distress.

Globally, adolescent mental health constitutes a significant public health concern. Approximately one in seven adolescents aged 10–19 experiences a diagnosable mental disorder, with anxiety and depressive disorders among the leading causes of years lived with disability (World Health Organization [WHO], 2021). Early-onset emotional disorders are associated with academic disengagement, school dropout, and long-term socioeconomic disadvantage (Weare & Nind, 2011), underscoring the necessity of school-based early detection and preventive intervention.

Digital transformation further amplifies adolescent vulnerability. Social media environments intensify upward social comparison, public performance visibility, and validation dependence. Empirical syntheses indicate significant associations between problematic social media use and anxiety, depression, and body dissatisfaction (Odgers & Jensen, 2020). Cybervictimization and algorithm-driven exposure to curated achievement narratives exacerbate perceived inadequacy and performance anxiety, positioning digital platforms as psychosocial ecosystems rather than neutral communication tools.

In Vietnam, these global stressors intersect with structurally embedded academic pressures, including highstakes graduation examinations and competitive university entry systems. Cultural expectations emphasizing filial obligation and academic excellence further heighten performance stress. Empirical studies document associations between academic expectation stress and adolescent emotional distress in Asian contexts, including Vietnam (Ang & Huan, 2006; Nguyen, 2017). Although school-based counseling is formally recognized in policy discourse, implementation remains uneven; services frequently lack professional training standards, confidentiality safeguards, and dedicated infrastructure (Tran & Weiss, 2018).

In Long Xuyen city, An Giang province, Vietnam anecdotal reports suggest rising academic burnout, peer conflict, and digital-related stress among high school students; however, systematic empirical assessment of psychosocial needs and institutional readiness remains limited.

To address this gap, the present study employs a convergent mixed-methods design integrating quantitative and qualitative data to: (1) assess the prevalence and typology of psychosocial concerns; (2) examine students' perceptions of counseling accessibility and necessity in the digital era; (3) identify structural and professional constraints within existing services; and (4) propose contextually grounded, evidence-based strategies for strengthening school-based psychological counseling. By situating local findings within global adolescent mental health scholarship, this study contributes empirically informed recommendations for counseling system reform in emerging educational contexts.

LITERATURE REVIEW

Adolescent Development and Mental Health Vulnerability

Adolescence is a critical developmental stage characterized by biological maturation, cognitive restructuring, and psychosocial reorganization. Erikson (1968) conceptualizes this period as identity versus role confusion, in which successful identity consolidation fosters resilience, whereas identity diffusion increases vulnerability to internalizing disorders. Neurodevelopmental research demonstrates asynchronous maturation between the limbic system and the prefrontal cortex, heightening sensitivity to peer evaluation, risk-taking, and emotional volatility (Casey, Jones, & Hare, 2008; Steinberg, 2014). In competitive school contexts, these dynamics may intensify stress reactivity and anxiety.

Self-Determination Theory posits that psychological well-being depends on the fulfillment of autonomy, competence, and relatedness (Ryan & Deci, 2020). Autonomy-supportive teaching practices are positively associated with academic engagement and emotional well-being, whereas controlling climates predict anxiety and burnout (Jang, Reeve, & Deci, 2010). Globally, approximately 14% of adolescents aged 10–19 experience a mental health disorder, with anxiety and depression among leading contributors to disability-adjusted life years (World Health Organization [WHO], 2021), underscoring the urgency of early school-based prevention.

Digital Era Stressors and Psychosocial Amplification

Digital transformation has reshaped adolescent identity formation and peer interaction while introducing significant psychosocial risks. Meta-analytic evidence links cybervictimization to increased depressive symptoms, anxiety, and suicidal ideation (Kowalski et al., 2014). Social media platforms amplify upward social comparison through algorithm-driven exposure to idealized achievements and lifestyles, predicting higher internalizing symptoms, particularly among emotionally vulnerable adolescents (Odgers & Jensen, 2020).

Excessive screen time is associated with sleep disruption and impaired emotional regulation, with sleep deprivation strongly correlated with mood dysregulation and heightened stress reactivity (Short et al., 2015). The

WHO (2021) further identifies digital exposure as a contributory factor in rising adolescent anxiety trends, particularly when combined with academic pressures.

Effectiveness and Structural Determinants of School-Based Counseling

School-based psychological counseling is an evidence-based platform for early identification and intervention. Comprehensive counseling programs are positively associated with improved academic outcomes and school climate (Carey & Dimmitt, 2012), while meta-analyses show moderate effect sizes for socio-emotional interventions in reducing behavioral risk and enhancing emotional regulation (Weare & Nind, 2011).

The American School Counselor Association (2019) emphasizes competency-based preparation, ethical standards, data-informed practice, and multi-tiered systems of support as determinants of effectiveness. However, in emerging systems such as Vietnam, counseling services often lack standardized training, confidentiality safeguards, and dedicated infrastructure (Tran & Weiss, 2018), limiting preventive reach and therapeutic depth. From an ecological systems perspective (Bronfenbrenner, 1979), sustainable impact requires structural alignment across individual, institutional, and policy levels.

Collectively, the literature converges on three conclusions: adolescence is neurodevelopmentally sensitive to stress; digital environments amplify vulnerability; and professionally structured, well-resourced school counseling systems are essential for mitigating risk and promoting resilience.

METHODOLOGY

Research Design and Participants

This study adopted a convergent parallel mixed-methods design, integrating quantitative and qualitative data collected concurrently within the same research phase and analyzed independently prior to integration. This design was selected to capture both the measurable prevalence of psychosocial concerns and the contextualized institutional dynamics shaping school-based counseling practices. Quantitative data provided statistical estimates of stress exposure, emotional distress, and perceived counseling necessity, while qualitative inquiry generated in-depth insights into lived experiences, cultural influences, and structural constraints. Integration occurred at the interpretation stage through joint display comparison and thematic–statistical convergence analysis, thereby strengthening construct validity, internal coherence, and explanatory depth.

The research was conducted in four public high schools in Long Xuyen city, An Giang province, representing both urban and peri-urban educational contexts to enhance ecological validity. The final sample comprised 576 participants, including 528 students (Grades 10–12), 42 teachers assigned to counseling or student support roles, and 6 school administrators responsible for student affairs and counseling governance.

Student Sample

A stratified random sampling strategy was employed to ensure proportional representation across grade level (10, 11, 12), gender, academic performance categories (high, average, below average), and study tracks (natural sciences, social sciences, general curriculum). This stratification minimized sampling bias and improved representativeness within the local high school population. The mean age of student participants was 16.4 years ($SD = 0.92$).

Teacher and Administrator Sample

Teachers were selected based on documented involvement in counseling-related responsibilities, including homeroom advisory duties, psychological support coordination, and student discipline counseling. School administrators were purposively sampled due to their oversight authority in student well-being policy implementation and institutional decision-making.

Inclusion criteria required active engagement in counseling implementation or supervisory functions during the preceding academic year. This ensured that participants possessed direct experiential knowledge of institutional counseling practices and systemic constraints.

Overall, the sampling framework was designed to balance representativeness (student population) with functional relevance (educational personnel), thereby ensuring methodological rigor and contextual validity consistent with standards in educational and psychological research.

Quantitative and Qualitative Data Collection

A structured, multi-dimensional questionnaire was developed to assess five core constructs: (1) academic stress, (2) digital stress exposure, (3) emotional distress indicators, (4) help-seeking intention, and (5) perceived necessity of school-based counseling. Items were adapted from validated international instruments and culturally contextualized for Vietnamese high school settings. Responses were measured on a 5-point Likert scale.

The instrument demonstrated strong internal consistency (Cronbach's $\alpha = 0.87$), with subscale reliabilities ranging from 0.78 to 0.89. Exploratory factor analysis confirmed a five-factor structure with satisfactory sampling adequacy ($KMO > 0.80$; Bartlett's test $p < .001$), supporting construct validity. Content validity was established through expert review by educational psychology specialists.

To complement survey findings, qualitative data were collected concurrently over a six-month period using methodological triangulation. Sixteen focus group discussions with students (6–8 participants per group) explored experiences of academic pressure, digital stress, and counseling perceptions. In addition, 48 semistructured interviews were conducted with teachers and administrators to examine professional competence, institutional constraints, ethical practices, and implementation challenges. Non-participant observations of counseling settings and analysis of institutional documents (e.g., counseling logs, school reports, policy guidelines) were conducted to verify structural conditions and operational practices.

Qualitative data were analyzed using thematic analysis following Braun and Clarke's (2006) six-phase framework. Coding and theme development were conducted systematically to ensure analytical transparency. Credibility was strengthened through triangulation, peer debriefing, member checking, and maintenance of an audit trail.

This integrated data collection and analysis strategy ensured methodological rigor, contextual validity, and empirical robustness consistent with standards of Scopus-indexed educational psychology research.

RESULTS

Quantitative Findings

Analysis of survey data revealed a high prevalence of psychosocial strain among high school students in Long Xuyen. A substantial proportion of participants (76%) reported moderate to high levels of academic stress, with 64% indicating significant anxiety specifically associated with university entrance examinations. These findings reflect the salience of high-stakes academic evaluation within the local educational context.

Digital-related stressors were also prominent. Approximately 58% of students reported experiencing stress linked to online social comparison, while 41% indicated direct or indirect exposure to cyberbullying. Notably, 69% expressed a clear need for confidential psychological support within the school setting.

Correlation analysis demonstrated a statistically significant positive relationship between digital stress exposure and anxiety symptoms ($r = .52$, $p < .01$), suggesting that digital environments function as an amplifying factor for emotional distress rather than as an isolated contextual variable. The magnitude of this association indicates moderate-to-strong linkage, underscoring the psychological implications of digital immersion in adolescent life.

Regarding institutional support, 82% of students agreed that professional counseling services are "necessary" or "very necessary" in high schools. Areas identified as priority domains included career orientation, emotional regulation support, crisis intervention, and mediation of digital-related conflicts. These results collectively indicate both high psychosocial demand and strong perceived institutional need for structured counseling services.

Qualitative Findings

Thematic analysis generated four interrelated domains that contextualize and deepen interpretation of quantitative patterns.

Theme 1: Academic–Identity Pressure Nexus

Students described academic performance not merely as an educational requirement but as a determinant of personal worth and social recognition. Fear of examination failure was frequently associated with anticipated family disappointment and diminished social status. Academic competition was thus intertwined with identity validation, creating a convergence of performance pressure and self-concept vulnerability.

Theme 2: Digital Amplification of Emotional Distress

Participants consistently reported that social media environments intensify perceived inadequacy through upward comparison and public visibility of peer achievements. Online ranking displays, academic award announcements, and curated self-presentations contributed to performance anxiety and emotional exhaustion. Digital platforms were perceived as continuous evaluative spaces extending beyond classroom boundaries.

Theme 3: Confidentiality and Trust Deficit

Despite recognizing the necessity of counseling services, students expressed reluctance to seek help due to concerns about confidentiality breaches and hierarchical teacher–student dynamics. Counseling roles performed by teaching staff were often perceived as evaluative rather than supportive, thereby inhibiting emotional disclosure. Trust emerged as a critical determinant of help-seeking behavior.

Theme 4: Professional Capacity Gaps

Teachers acknowledged limited formal preparation in counseling theory, crisis intervention, and ethical governance. Counseling interactions frequently adopted directive or advice-oriented approaches rather than evidence-based therapeutic facilitation. Time constraints and role ambiguity further constrained professional efficacy.

Taken together, quantitative and qualitative findings reveal a structural mismatch between escalating psychosocial needs and existing counseling capacity. Academic and digital stressors interact to produce compounded vulnerability, while institutional limitations—particularly confidentiality concerns and insufficient professional training—restrict service effectiveness.

The convergence of statistical prevalence data and thematic insights strengthens the conclusion that high school counseling services in Long Xuyen require systematic professionalization and structural reinforcement to adequately respond to contemporary adolescent psychosocial demands.

DISCUSSION

The findings reveal a structural misalignment between the high level of students' psychosocial needs and the limited institutional capacity of school-based counseling in Long Xuyen high schools. While quantitative data show substantial academic and digital-related stress and strong demand for confidential support, qualitative evidence highlights deficits in professional training, infrastructure, governance clarity, and ethical safeguards. Counseling remains formally present but not fully institutionalized as a professional subsystem within school governance.

Digital transformation emerges as a stress amplifier rather than a neutral context. The significant association between digital stress and anxiety ($r = .52, p < .01$) indicates that online environments intensify comparison, visibility, and performance pressure, compounding identity and examination-related stress within a competitive academic culture.

Students' reluctance to seek counseling reflects structural trust deficits—particularly concerns about confidentiality, blurred disciplinary–counseling roles, and perceived professional limitations. From a systems perspective, effective counseling requires professional specialization, dedicated infrastructure, data-informed practice, and ethical governance. These pillars remain underdeveloped, resulting in reactive and fragmented services.

Therefore, strengthening school-based counseling demands systemic reform: formal recognition of counseling as a core educational function, professionally trained personnel, confidential physical and digital infrastructure, and integration of psychosocial indicators into school quality assurance frameworks. Aligning institutional architecture with the developmental realities of adolescents in the digital era is both an educational and governance imperative.

Proposed Solutions for Strengthening School Counseling in Long Xuyen, An Giang, Vietnam Professionalization and Competency-Based Certification

The current reliance on teachers without formal psychological training necessitates a transition toward competency-based professionalization. A standardized certification pathway should be developed in collaboration with universities offering programs in educational psychology or counseling psychology. This pathway should include structured coursework in developmental psychopathology, counseling theory, ethical practice, crisis intervention, and digital mental health literacy, followed by supervised practicum components conducted within school settings.

Supervised practicum partnerships between high schools in Long Xuyen and regional universities would serve dual functions: enhancing professional competence and creating a sustainable training pipeline. Additionally, institutionalized clinical supervision—conducted periodically by licensed psychologists or academic supervisors—should be embedded into school governance structures. Ongoing supervision supports ethical decision-making, case consultation, and professional resilience, particularly in contexts where counselors manage high-risk cases involving anxiety, self-harm ideation, or cyberbullying.

Professionalization must also incorporate digital competencies, including management of online disclosures, ethical handling of digital data, and guidance for students navigating social media-related distress.

Structural Institutionalization within Schools

Effective counseling requires structural visibility and organizational legitimacy. Each high school should progressively move toward employing at least one full-time, professionally trained school psychologist whose primary responsibility is student mental health support rather than instructional duties. Clear role differentiation reduces ambiguity between evaluative and supportive functions, thereby strengthening student trust.

Confidential counseling rooms must be physically separated from administrative or disciplinary offices to ensure privacy and psychological safety. In the digital era, infrastructure should also include secure digital recordkeeping systems compliant with data protection standards.

Sustainable implementation further depends on dedicated annual budgets allocated specifically for counseling activities, including training, supervision, psychoeducational materials, and digital tools. Without financial anchoring, counseling remains peripheral and vulnerable to institutional deprioritization.

Implementation of a Multi-Tiered System of Support (MTSS)

Given resource constraints and heterogeneous student needs, a multi-tiered system of support offers a scalable and evidence-informed framework.

Tier 1 – Universal Prevention: Whole-school initiatives should integrate socio-emotional learning (SEL) curricula, stress management workshops, and digital literacy education addressing cyberbullying, online comparison, and healthy technology use. Embedding these modules within formal timetables ensures normalization of mental health discourse rather than reactive intervention.

Tier 2 – Targeted Group Intervention: Students identified as moderate-risk through screening tools or teacher referrals should receive structured small-group counseling focusing on academic stress management, emotional regulation, or peer relationship skills. Group formats increase efficiency while fostering peer normalization of distress experiences.

Tier 3 – Intensive Individual Support: Students presenting significant emotional distress, trauma exposure, or high-risk behaviors should receive individualized counseling supported by formal referral pathways to external mental health services when necessary. Collaboration with local hospitals or mental health centers ensures continuity of care beyond school boundaries.

Integration of Digital Counseling Modalities

Recognizing the centrality of digital environments in adolescent life, counseling services must extend beyond face-to-face modalities. Schools should develop secure, anonymous digital consultation platforms allowing students to initiate contact confidentially. Such systems can reduce stigma-related barriers and increase accessibility, particularly for students hesitant to seek in-person support.

Periodic online mental health screening tools can facilitate early identification of at-risk students while generating aggregated data to inform preventive planning. However, digital screening must be accompanied by clear referral and follow-up protocols to prevent superficial data collection without intervention.

Additionally, psychoeducational webinars and digital workshops for students and parents can address emerging topics such as social media comparison, screen-time regulation, and online conflict resolution. Integrating digital communication channels enhances responsiveness to contemporary psychosocial dynamics.

Strengthening Family–School Collaboration

Given the strong influence of family expectations within the Vietnamese cultural context, alignment between school counseling and parental engagement is critical. Structured parent workshops on adolescent developmental psychology, stress management, and balanced academic expectations can reduce performance-driven pressure cycles.

Schools should establish clear communication protocols that maintain student confidentiality while fostering constructive parental involvement. Transparent guidelines regarding information-sharing boundaries help prevent ethical breaches and reinforce trust in counseling services.

Family–school collaboration should move beyond reactive problem-solving toward preventive partnership, promoting shared responsibility for adolescent well-being.

Policy Anchoring and Intersectoral Collaboration

Long-term sustainability requires embedding counseling indicators into school quality assurance frameworks at the provincial level. Metrics such as student well-being surveys, counseling utilization rates, and preventive program coverage should complement academic performance indicators in institutional evaluation systems.

Furthermore, formalized collaboration between the education sector and health services is essential. Memoranda of understanding with local hospitals, mental health clinics, and social services can establish referral pathways, shared training initiatives, and crisis response coordination.

At the policy level, provincial education authorities should develop clear guidelines defining professional standards, ethical governance structures, and digital data protection requirements for school counseling operations.

Collectively, these solutions recognize that strengthening school counseling in Long Xuyen requires systemic transformation rather than isolated interventions. Professional competence, structural legitimacy, digital integration, ecological collaboration, and policy reinforcement must operate synergistically. In the context of accelerating digitalization and intensified academic competition, school-based psychological services must

evolve into a proactive, ethically grounded, and data-informed system capable of supporting adolescent resilience in the twenty-first century.

CONCLUSION

This study shows that high school students in Long Xuyen, An Giang province are experiencing substantial psychosocial strain due to intensified academic demands and pervasive digital exposure. High levels of academic stress, exam anxiety, and digital comparison pressure were identified, with a significant association between digital stress and anxiety symptoms. Most students expressed a clear need for confidential, professional psychological support within schools, indicating a gap between demand and institutional capacity.

Qualitative findings reveal that academic pressure is closely tied to identity and social value, while digital environments extend competition into students' private lives. Institutional limitations—such as insufficient professional training, weak confidentiality safeguards, and cultural stigma around help-seeking—further constrain service effectiveness.

Overall, the results highlight a structural misalignment between adolescent developmental needs and current school counseling systems, underscoring the need for professionalized, systematic, and digitally responsive reform.

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