

Review

Peer Relationship Quality, Meaningful Social Media Use, and Social Well-Being Among International Secondary School Students in Malaysia: An Integrated Conceptual Framework

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Abstract

Adolescents in international secondary schools develop their social lives across culturally diverse campuses and digitally connected peer networks. Although friendship quality, social media use, and adolescent well-being have each received substantial attention, the mechanisms through which offline and online social experiences jointly relate to social well-being remain conceptually fragmented. This structured conceptual review develops an integrated framework for international secondary school students in Malaysia. The framework is informed by the relatedness branch of Self-Determination Theory and the resource-exchange logic of Social Exchange Theory and proposes that peer relationship quality and meaningful social media use relate to social well-being via relatedness need satisfaction, perceived social support, and psychological resilience. Gender and cultural identity are conceptualised as contextual moderators rather than universal determinants. The review employs a transparent, purposive search and synthesis process, and differentiates the framework from previous reviews on friendship quality, social media use, or Self-Determination Theory as isolated constructs. This paper contributes by integrating offline and online social contexts, elucidating complementary motivational, resource and adaptive pathways, and situating these relationships within Malaysian international schools, where foreign curricula, English medium instruction, mixed nationalities, student mobility and cultural identity negotiation may shift the salience and strength of otherwise general adolescent mechanisms. The propositions are untested and are therefore offered as theoretically grounded expectations rather than empirical conclusions. The framework offers a focused agenda for longitudinal, multilevel, cross-cultural and intervention research and offers cautious guidance for school-based belonging, peer-support, resilience and digital citizenship initiatives.



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1. Introduction

Social well-being concerns the quality of individuals' functioning in society and includes social integration, social acceptance, social contribution, social coherence, and social actualisation (Keyes 1998). During adolescence, these dimensions are especially relevant because schools and peer networks are major settings in which young people develop

belonging, acceptance, identity, participation, and confidence in their social environment. Social well-being is related to, but conceptually distinct from, emotional and psychological well-being; it therefore provides a useful outcome for examining how adolescents function within their school communities rather than focusing only on distress or life satisfaction (Gallagher et al. 2009; Keyes 1998).

International secondary schools provide a particularly rich context for investigations of these processes. International schools are described by the Malaysian Ministry of Education as institutions that provide a foreign national curriculum, use English as the medium of instruction and enroll both Malaysian and non-Malaysian students (Ministry of Education Malaysia n.d.). Students, therefore, may interact across the dimensions of nationality, language, cultural background, curriculum history, and mobility experience. Malaysian research has also shown that international schools bring together host-country nationals and expatriate communities and that culturally diverse school environments present both opportunities and organisational challenges for inclusion and cultural understanding (Bailey 2015; Velarde and Ghani 2019). These features do not make the proposed psychological mechanisms specific to international-school students; they do, however, make international schools a boundary-rich context in which the mechanisms may be further accentuated or operate with varying strength.

One key offline social experience is quality of peer relationships. In this paper, this refers to supportive and relational qualities of adolescent friendships (e.g., trust, emotional closeness, companionship, acceptance, intimacy, and help). Systematic longitudinal evidence suggests that higher-quality friendships are associated with greater adolescent well-being and adjustment and that conflictual, unstable, or rejecting relationships may contribute to loneliness and impair social functioning (Alsarrani et al. 2022; Liu et al. 2024; Luijten et al. 2023; Šutić et al. 2025). The more important question is not whether adolescents have peers, but whether their relationships offer reliable sources of acceptance, reciprocity, and emotional security.

Social media should be conceptualised as a social context rather than as inherently beneficial or harmful. Meaningful social media use refers to active, reciprocal, and relationship-oriented engagement, including maintaining friendships, exchanging emotional support, seeking or providing assistance, and sustaining social ties across physical distance. By contrast, passive browsing, upward social comparison, cyberbullying, exclusion, compulsive engagement, and excessive emotional dependence may undermine adolescents' social functioning and well-being. Contemporary evidence suggests that the effects of social media depend less on the amount of time spent online than on the quality, purpose, and interpersonal characteristics of online interactions (Agyapong-Opoku et al. 2025; Valkenburg et al. 2022; Verduyn et al. 2017; West et al. 2024).

This is already built on solid foundations. West et al. (2024) mapped adolescent social media research across the three basic needs of Self-Determination Theory. McKeering et al. studied well-being, engagement and resilience among international-school students. Angelini et al. studied the associations of social media characteristics, online social support, emotional expression and friendship quality. Alsarrani et al. (2022) reviewed evidence of the link between friendship quality and adolescent subjective well-being. This research collectively relates the three proposed mediating mechanisms, contextual moderators, offline peer experiences, meaningful online connection, and social well-being in Malaysian international-school settings but does not present one model that connects all of them at once.

Some researchers studied students from different countries and found that moving to a new place can be tough for students. They can have a hard time feeling like they do not belong and not doing well in school, as seen in the research by McKeering et al. (2021). The

main theme is to examine how teenagers interact with each other face-to-face and online, and the effect of this on their well-being. It also explores how gender and cultural identity may affect secondary schools. The research that is already there does not really support this idea, even though it does show some important relationships between these things. Friendship quality and social media research are still very important to understanding how teenagers really feel about their lives.

The present paper therefore does not claim that the individual constructs have never been connected. Its contribution lies in specifying how they may be organised into a coherent process model. The relatedness branch of Self-Determination Theory explains why supportive social experiences can satisfy the need to feel connected and valued; Social Exchange Theory explains how repeated reciprocal exchanges become perceptions that support is available; and resilience research explains how social resources may be converted into adaptive capacity when adolescents encounter conflict, exclusion, mobility, or academic and intercultural stress. The framework also recognises that the same processes may occur in general adolescent populations while arguing that international-school conditions can shape their salience and boundary conditions.

Accordingly, this conceptual review has four objectives: to clarify the distinctive roles of peer relationship quality and meaningful social media use; to justify relatedness need satisfaction, perceived social support, and psychological resilience as complementary mediators; to explain why gender and cultural identity may condition selected pathways; and to formulate a transparent, empirically testable framework for Malaysian and other multicultural international-school settings. Thirteen propositions are developed as theoretical expectations. They should not be interpreted as confirmed causal effects until tested with appropriate longitudinal, multilevel, and cross-cultural designs.

2. Conceptual Review Design and Search Strategy

This paper follows a structured conceptual review rather than a systematic review or meta-analysis. A conceptual review is appropriate when the main purpose is to synthesize constructs and theories, to clarify explanatory mechanisms and to propose a new model, rather than estimating an average effect or offering a full list of all eligible studies (Jaakkola 2020; Snyder 2019). Following a theory-synthesis and model-development approach, the review considers theories as explanatory tools, compares overlapping constructs, identifies missing links and formulates propositions that can be empirically tested in the future.

The literature identification process was purposive, transparent, and iterative. Searches were conducted across Scopus, Web of Science Core Collection, PubMed, and ERIC, with Google Scholar and backward and forward citation searching used to locate additional theoretical, contextual, and open-access sources (see Table 1). The principal search window covered January 2017 to July 2026 so that the synthesis reflected recent adolescent and digital-social research; seminal publications published before 2017 were retained when they defined core constructs or theories, including Keyes' model of social well-being, Blau's Social Exchange Theory, Self-Determination Theory, and foundational resilience research. No numerical claim of exhaustive coverage is made because the aim was conceptual integration rather than PRISMA-style completeness.

The synthesis was performed in three stages. First, the constructs were bounded to avoid conceptual overlap, with relatedness need satisfaction representing motivational fulfillment, perceived social support representing a belief about available relational resources, and psychological resilience representing adaptive capacity. Second, evidence was organised into antecedent-to-mediator, mediator-to-outcome, and moderator pathways. Finally, Self-Determination Theory and Social Exchange Theory were integrated by assigning each theory a non-duplicative explanatory role. Contradictory evidence, especially in relation to

social media use, was not removed but instead led to a narrower definition of meaningful use and to the cautious wording of the propositions.

Table 1. Conceptual review protocol.

Element	Specification
Purpose	Theory synthesis and model development: integrate offline and online social experiences and specify mechanisms and boundary conditions.
Sources	Scopus; Web of Science Core Collection; PubMed; ERIC; supplementary Google Scholar and backward/forward citation searching.
Time frame	January 2017–July 2026 for contemporary evidence; earlier seminal theory and construct-defining sources retained.
Core search domains	Adolescent * OR secondary school student *; social well-being OR belonging OR social functioning; peer relationship quality OR friendship quality; social media use OR online communication; relatedness; perceived social support; resilience; gender; cultural identity; international school; Malaysia OR multicultural education.
Inclusion criteria	English-language peer-reviewed empirical studies, reviews, and conceptual papers relevant to adolescents or secondary-school contexts; studies addressing at least one proposed relationship; international-school or Malaysian evidence where available; seminal theoretical works.
Exclusion criteria	Studies focused exclusively on adults or clinical populations without transferable theoretical relevance; higher-education-only evidence used as primary support; studies treating screen time as the sole indicator without relational content; non-scholarly commentary; duplicate reports.
Synthesis procedure	Construct definitions were compared, evidence was organised by proposed pathway, theoretical roles were assigned, contradictory findings were retained, and propositions were formulated only where the combined logic supported a testable expectation.

Note: The review was designed for conceptual integration and proposition development; it was not intended as an exhaustive systematic review or meta-analysis. The asterisk (*) represents truncation symbol used in database searches to retrieve different variations of a word, such as *adolescent* and *adolescents* or *student* and *students*.

The review prioritised adolescent evidence. Findings from adult or university samples were not used as the principal basis for propositions. Contextual evidence from Malaysian and other Asian international schools was used to establish why the setting matters, while broader adolescent evidence was used to explain mechanisms that are not geographically unique. This distinction reduces the risk of presenting a context-sensitive application as a mechanism that could operate only in Malaysia.

3. Conceptual Background and Theoretical Foundation

3.1. Social Well-Being

Keyes (1998) conceptualises social well-being as consisting of five dimensions: social integration, social acceptance, social contribution, social coherence and social actualisation. In the setting of schools, these dimensions relate to students' sense of belonging to a community, their positive perceptions of others and the social environment, their belief that they contribute, their comprehension of the social world around them, and their sense

of collective growth. This outcome is well suited to the present framework because peer relationships and digital communication are social experiences, while the international-school context raises questions of belonging, participation and acceptance across cultural groups. Therefore, the paper does not use general well-being as an interchangeable label but retains social well-being as the specific dependent construct.

3.2. *Peer Relationship Quality*

Peer relationship quality refers to the supportive and conflict-related characteristics that determine the quality of adolescents' friendships. Positive features such as trust, closeness, companionship, acceptance, intimacy, and support can provide emotional security and opportunities for reciprocal care, whereas conflict, rejection, and instability may undermine adjustment and social functioning. Longitudinal and systematic evidence indicates that friendship quality is associated with adolescent well-being and adjustment beyond the simple number of friendships maintained (Alsarrani et al. 2022; Luijten et al. 2023; Šutić et al. 2025).

3.3. *Meaningful Social Media Use*

Meaningful social media use is conceptualised as a pattern of engagement, not as a duration measure. It includes active communication, friendship maintenance, supportive disclosure, emotional encouragement, identity expression in trusted networks and reciprocal support. This definition is deliberately conditional: social media can also transform peer experiences through publicness, availability, quantifiability, visualness and persistent comparison; and outcomes vary between adolescents (Angelini et al. 2023; Valkenburg et al. 2022; West et al. 2024). The framework thus predicts positive pathways only for meaningful, supportive and relationship-oriented use, not for social media use in general.

3.4. *The Relatedness Branch of Self-Determination Theory*

According to Self-Determination Theory, well-being is promoted when basic psychological needs for autonomy, competence, and relatedness are satisfied (Ryan and Deci 2000, 2017, 2020). The present paper does not argue against the importance of autonomy and competence. Social media can either support or hinder autonomy through identity expression and perceived choice, and competence through feedback, self-efficacy, or comparison. West et al. (2024) confirm that all three needs are represented in adolescent social media research. The present model nevertheless focuses on relatedness because both antecedents are relational and the focal outcome concerns social functioning. The claim is therefore intentionally narrowed to the relatedness pathway of Self-Determination Theory rather than to a complete SDT account of social media and well-being.

Relatedness need satisfaction is the experience of being connected to, cared for, and important to others and being able to maintain meaningful relationships. This need can be satisfied through high-quality friendships via acceptance and closeness; meaningful online exchanges can extend it through maintenance of relationships across physical distance. Relatedness is retained as a mediator because it captures the motivational experience created by supportive interaction, not simply the amount of contact or objective receipt of help.

3.5. *Social Exchange Theory and Perceived Social Support*

Social Exchange Theory states that relationships develop through a series of exchanges of valued resources and expectations of reciprocity (Blau 1964; Cropanzano et al. 2017). In adolescent peer networks, these resources include listening, companionship, advice, recognition, practical assistance, and defense during conflict. When such exchanges are dependable and reciprocal, students can form a general belief that support is available

when needed. Thus, perceived social support is conceptually different from relatedness: relatedness is the satisfaction of a psychological need, whereas perceived support is the anticipated availability of social resources.

The same logic of exchange applies online when the communication is targeted, responsive, and supportive, whereas public feedback, passive observation, or interaction with low reciprocity may not create the same expectation for support. In this way, Social Exchange Theory helps explain the framework's distinction between meaningful interaction and undifferentiated social media use.

3.6. Psychological Resilience as an Adaptive Mediator

Psychological resilience refers to an individual's adaptive capacity to respond effectively to adversity, stress, and life transitions rather than to a fixed personal characteristic (Masten 2001, 2014; Masten and Barnes 2018). Contemporary resilience theory conceptualises resilience as emerging through dynamic interactions between personal strengths and environmental resources. Consequently, supportive peer relationships and perceived social resources may strengthen adolescents' ability to cope with interpersonal conflict, school transitions, cultural adjustment, and other developmental challenges. Research conducted among adolescents attending international schools further suggests that resilience is positively associated with student engagement and well-being, while broader adolescent evidence demonstrates that resilience partially explains the beneficial effects of perceived social support on well-being (Fu et al. 2022; McKeering et al. 2021).

In the proposed framework, resilience is distinct from perceived support. A student may believe that support is available yet still differ in the ability to recover, regulate emotion, repair relationships, and persist through exclusion or transition. Resilience is therefore positioned as an adaptive mechanism through which supportive offline and online experiences may be converted into sustained social functioning.

3.7. Gender and Cultural Identity as Contextual Moderators

Gender differences in friendship expectations, emotional disclosure, help-seeking, exposure to online risk and sensitivity to feedback may exist (Angelini et al. 2023; Foody et al. 2019). Evidence on friendship quality, cyberbullying and social media features suggests pathway strengths may differ by gender groups. The framework does not assume one gender is better off, and future tests should not reduce gender to an unquestioned binary where more inclusive measurement is possible.

Cultural identity is the meaning and sense of belonging students derive from heritage, host, and school-community affiliations. It is relevant in Malaysian international schools because local and mobile students may negotiate multiple cultural referents while learning through foreign curricula and English-medium instruction. Cultural identity and classroom diversity climates are associated with adolescents' adjustment and identity development, suggesting that the benefits of relatedness, support, and resilience may partly depend on students' experiences of their identities as recognised and compatible with the school environment (Bailey 2015; Hölscher et al. 2024; Schachner et al. 2024; Baumert et al. 2023).

3.8. Integration of the Theoretical Framework

The integrated framework is constructed by assigning complementary roles to three explanatory layers. First, the relatedness branch of Self-Determination Theory explains the motivational experience produced when students feel connected and valued. Second, Social Exchange Theory explains how repeated reciprocal exchanges become expectations that emotional, informational, and practical support will be available. Third, resilience theory explains how relational resources can strengthen adaptive responses to conflict,

rejection, transition, and intercultural stress. The theories are therefore not presented as interchangeable explanations of the same process.

The causal sequence remains a proposition rather than a demonstrated fact. Peer relationship quality and meaningful social media use may activate more than one mechanism simultaneously; the mediators may influence each other, and reciprocal feedback is possible. For example, resilient students may form higher-quality relationships, and socially well-integrated students may use social media more constructively. The model simplifies these reciprocal dynamics to generate a parsimonious set of initial tests.

4. Development of Conceptual Propositions

The following propositions are derived from the structured synthesis and are intentionally framed as testable expectations rather than confirmed effects. Each pathway is supported by a wider evidence base than a single repeated set of studies, while the social media propositions are contingent on meaningful and supportive use.

4.1. Peer Relationship Quality and Relatedness Need Satisfaction

Adolescents' high-quality friendships offer acceptance, companionship, intimacy, and emotional security, like relatedness. As per Self-Determination Theory (Ryan and Deci 2000, 2017, 2020), repeated interactions in which adolescents feel cared for and important satisfy the need for connection. Systematic and longitudinal friendship research also suggests that supportive relationship quality is associated with positive adjustment and well-being, making relatedness a plausible proximal mechanism, rather than just another term for friendship quality (Alsarrani et al. 2022; Luijten et al. 2023).

Proposition 1. *Peer relationship quality is positively associated with relatedness need satisfaction.*

4.2. Peer Relationship Quality and Perceived Social Support

Perceived support is the result of frequent interactions with peers as responsive and reliable. Social Exchange Theory suggests that reciprocal listening, advice, protection and companionship create expectations of future resource availability (Blau 1964; Cropanzano et al. 2017). Literature on adolescent friendships highlights help, security and acceptance as the main quality dimensions, while online-offline peer studies show that perceived support can link social interaction features and friendship outcomes.

Proposition 2. *Peer relationship quality is positively associated with perceived social support.*

4.3. Peer Relationship Quality and Psychological Resilience

Resilience is fostered in systems as well as individuals. Trusted peers can provide reassurance, alternative perspectives, practical support for coping, and opportunities for conflict resolution, which may be particularly useful when dealing with social rejection, school transition, and intercultural adjustment. Supportive relationships have been identified as protective systems in resilience theory, and peer relationships have been linked with resilience-relevant outcomes in adolescence, including reduced loneliness and improved adjustment (Liu et al. 2024; Masten and Barnes 2018; McKeering et al. 2021).

Proposition 3. *Peer relationship quality is positively associated with psychological resilience.*

4.4. Meaningful Social Media Use and Relatedness Need Satisfaction

Digital communication can maintain friendship continuity, enable supportive disclosure, and allow adolescents to remain connected across distance. These affordances are relevant for mobile students and cross-border friendships. However, the same plat-

forms can frustrate relatedness through exclusion, public comparison, or hostile feedback. The proposition therefore concerns meaningful use—active, reciprocal, and relationship-oriented engagement—rather than total use. This conditional expectation is consistent with Self-Determination Theory and with reviews showing that social media outcomes vary by need satisfaction, content, person, and interaction quality (Ryan and Deci 2020; Valkenburg et al. 2022; West et al. 2024).

Proposition 4. *Meaningful social media use is positively associated with relatedness need satisfaction.*

4.5. Meaningful Social Media Use and Perceived Social Support

Directed communication can provide emotional encouragement, information, reassurance, and rapid access to peers. When responses are reciprocal and trusted, these interactions can reinforce the belief that assistance is available. Angelini et al. (2023) found that perceived online social support helps explain links between social media features and friendship quality, while cross-national adolescent evidence consistently associates perceived support with favorable well-being indicators (Brisson et al. 2024). Passive observation or low-quality feedback is unlikely to produce the same effect.

Proposition 5. *Meaningful social media use is positively associated with perceived social support.*

4.6. Meaningful Social Media Use and Psychological Resilience

Meaningful online interaction may contribute to coping information, emotional encouragement, continuity of relationships, and access to supportive communities. These resources can help adolescents manage transitions and recover from stress. Conversely, comparison, cyberbullying, exclusion, and compulsive engagement can deplete coping resources. The proposed positive pathway is therefore conditional and should be tested against alternative harmful pathways rather than assumed from use frequency alone (Agyapong-Opoku et al. 2025; Masten and Barnes 2018; Marciano and Viswanath 2023; Valkenburg et al. 2022).

Proposition 6. *Meaningful social media use is positively associated with psychological resilience.*

4.7. Relatedness Need Satisfaction and Social Well-Being

Relatedness need satisfaction reflects adolescents' perceived sense of belonging, interpersonal acceptance, and meaningful social connection. According to Self-Determination Theory, satisfaction of the relatedness need promotes psychological adjustment and well-being by fostering feelings of inclusion and interpersonal security (Ryan and Deci 2020). Keyes (1998) model similarly identifies social integration and social acceptance as fundamental components of social well-being. Consistent evidence across educational settings further indicates that students who experience stronger school belonging and interpersonal connectedness generally report higher levels of social functioning and overall well-being.

Proposition 7. *Relatedness need satisfaction is positively associated with social well-being.*

4.8. Perceived Social Support and Social Well-Being

When students perceive that help is available, they may feel more valued, less isolated, and more able to participate in their social environment. Cross-national evidence involving adolescents demonstrates stable positive associations between multiple sources of perceived support and life satisfaction. Adolescent research shows that social support is associated with well-being both directly and through resilience. Although life satisfaction and social well-being are distinct, these findings support the broader protective role of

perceived support, and Keyes' model offers the specific social-functioning rationale for the proposed outcome.

Proposition 8. *Perceived social support is positively associated with social well-being.*

4.9. Psychological Resilience and Social Well-Being

Students who are resilient are more likely to recover from challenges, seek out help, repair relationships and remain engaged in conflict, transition, and adversity. These qualities can help to build social connection and community when encountering conflict, transition, and adversity. Evidence from international schools shows resilience is associated with student well-being and engagement, and research with adolescents suggests resilience predicts well-being and can transfer benefits from social support (Fu et al. 2022; McKeering et al. 2021).

Proposition 9. *Psychological resilience is positively associated with social well-being.*

4.10. Mediating Roles of Relatedness, Perceived Support, and Resilience

The model suggests three parallel but potentially connected mechanisms. Peer relationship quality can promote social well-being by satisfying the need for connection, creating an expectation of available support, and strengthening adaptive capacity. These mechanisms are conceptually distinct: a student can feel connected without believing that practical help is available, perceive support without yet possessing strong coping capacity, or be resilient while experiencing limited belonging. Testing them concurrently will show whether each pathway explains unique variance.

Proposition 10. *Relatedness need satisfaction, perceived social support, and psychological resilience mediate the association between peer relationship quality and social well-being.*

The same three mechanisms may also account for meaningful social media use when online engagement builds relationships, provides reciprocal support, and supplies coping resources. As social media may also yield negative experiences, mediation should be tested together with direct, negative, and reciprocal pathways. Person-specific and within-person designs are particularly important because average effects may hide substantial heterogeneity (Valkenburg et al. 2022; West et al. 2024).

Proposition 11. *Relatedness need satisfaction, perceived social support, and psychological resilience mediate the association between meaningful social media use and social well-being.*

4.11. Moderating Roles of Gender and Cultural Identity

Gender may influence the strength of selected pathways because adolescents can differ in friendship intimacy, emotional disclosure, help-seeking behavior, exposure to online risks, and sensitivity to social feedback. Previous research has identified gender related differences in friendship quality, cyberbullying involvement, and social media experiences; however, such differences should not be interpreted as indicating uniformly better outcomes for any gender group (Angelini et al. 2023; Foody et al. 2019). Gender is therefore conceptualised as a contextual moderator whose influence requires empirical examination rather than as a deterministic predictor.

Proposition 12. *Gender moderates one or more associations between relatedness need satisfaction, perceived social support, psychological resilience, and social well-being.*

Cultural identity may condition whether connection and support are interpreted as inclusive, identity-affirming, or socially costly. In culturally diverse schools, students may belong simultaneously to heritage, host-country, expatriate, linguistic, and school communities. Evidence on cultural identity and diversity climates suggests that adjustment depends partly on the compatibility between students' identities and their social environments (Hölscher et al. 2024; Schachner et al. 2024; Baumert et al. 2023).

Proposition 13. *Cultural identity moderates one or more associations between relatedness need satisfaction, perceived social support, psychological resilience, and social well-being.*

5. Proposed Integrated Conceptual Framework

Figure 1 summarises the proposed framework. Peer relationship quality and meaningful social media use are positioned as antecedent social experiences. Relatedness need satisfaction, perceived social support, and psychological resilience are proposed as mediating mechanisms, while social well-being is the focal outcome. Gender and cultural identity are contextual moderators of selected mediator-to-outcome pathways. The framework does not assume independence of antecedents: offline friendships can influence online behavior, and online experiences can reinforce or undermine offline relationships.

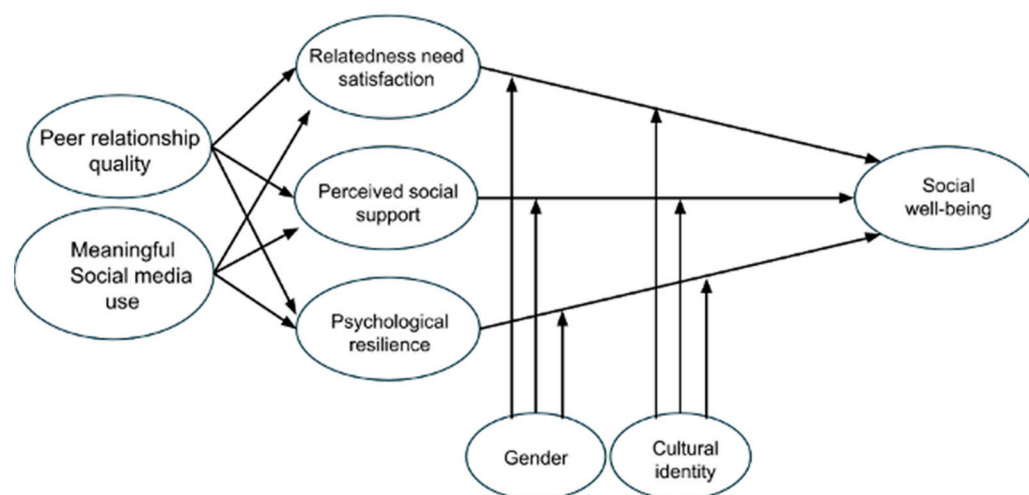


Figure 1. Proposed integrated conceptual framework.

The framework should initially be tested as a set of competing models rather than as a single unquestioned causal chain. Direct effects, parallel mediation, serial links between perceived support and resilience, reciprocal paths, and harmful forms of social media engagement should be compared. Longitudinal data are needed to identify temporal ordering. Multilevel data are useful because students are nested in classrooms and schools with different diversity climates, pastoral systems and digital policies.

Distinction from Closely Related Literature

The proposed model is not presented as the first study to associate any two of its constructs. Its distinctiveness lies in the configuration, outcome, and context. Table 2 shows how the framework extends rather than duplicates closely related work. For example, Dong et al. (2024) link perceived support and resilience with psychological well-being in university students, while Tannous-Haddad et al. (2024) examine support, self-compassion, culture, and psychological well-being. These studies substantiate partial mechanisms but do not integrate the present offline and online antecedents, three mediators, social well-being outcome, and international-school boundary conditions. The present framework therefore combines offline and online social experiences, assigns separate explanatory

roles to need satisfaction, resource availability, and adaptive capacity, focuses on social well-being, and specifies a culturally diverse Malaysian international-school application.

Table 2. Positioning of the proposed framework relative to closely related literature.

Study	Primary Contribution	Difference from the Present Framework
Alsarrani et al. (2022)	Systematic review of friendship quality and adolescent subjective well-being.	Does not integrate social media, three mechanisms, moderators, or an international-school social well-being outcome.
Angelini et al. (2023)	Empirical model linking social media features, online support, emotional expression, and friendship quality.	Focuses on friendship quality as an outcome and does not develop the present multi-mediator social well-being framework.
West et al. (2024)	Systematic scoping review of adolescent social media use through all three SDT needs.	Does not integrate offline friendship quality with SET, resilience, social well-being, and Malaysian international-school boundary conditions.
McKeering et al. (2021)	Empirical study of well-being, engagement, and resilience among early-adolescent international-school students.	Establishes contextual relevance but does not model offline and online antecedents, three mediators, or cultural identity moderation.
Dong et al. (2024)	Empirical model linking coping styles, perceived social support, resilience, and psychological well-being among university students.	Supports two protective mechanisms but does not examine adolescents, relatedness, offline and online antecedents, social well-being, or international-school moderators.
Tannous-Haddad et al. (2024)	Moderated-mediation study of perceived support, self-compassion, culture, and psychological well-being.	Examines a different mediator and outcome and does not integrate peer relationship quality, meaningful social media use, resilience, or international-school conditions.
Present framework	Integrates peer relationship quality and meaningful social media use with relatedness, perceived support, resilience, social well-being, gender, and cultural identity.	Offers a context-sensitive process model for Malaysian international secondary schools; all propositions require empirical testing.

Note: The table identifies differences in configuration, outcome, and context; it does not imply that earlier studies are deficient for their own research purposes.

6. Discussion and Theoretical Contributions

The principal contribution of this paper is integrative rather than discovery-based. Friendship research, social media research, need satisfaction theory, support research, and resilience research already provide evidence for individual links. The framework contributes by showing how these strands can be arranged into a coherent explanation of social well-being and by identifying where the theories complement rather than duplicate one another.

First, the framework connects offline and online peer contexts. Contemporary adolescents do not maintain wholly separate physical and digital social lives; interactions move across classrooms, messaging applications, social platforms, and cross-border networks. Treating meaningful social media use as a relational pattern rather than a neutral exposure count permits a more precise prediction: reciprocal and supportive use may extend friend-

ship resources, whereas passive or harmful use may undermine them. This formulation also accommodates the person-specific and context-dependent findings emphasised in recent reviews (Valkenburg et al. 2022; West et al. 2024).

Second, the framework separates three mechanisms. Relatedness need satisfaction describes motivational fulfilment, perceived social support describes an expectation of available resources, and resilience describes adaptive capacity. This distinction prevents the mediators from becoming interchangeable labels for positive relationships. It also creates stronger empirical tests because each construct should demonstrate discriminant validity and an incremental indirect effect.

Third, the framework identifies international schools as a context that can alter pathway salience rather than as a population to which universal theories are restricted. Malaysian international schools feature foreign curricula, are taught in English, enroll both Malaysian and non-Malaysian students, foster multicultural peer groups, and have a diversity of mobility histories (Bailey 2015; Ministry of Education Malaysia n.d.; Velarde and Ghani 2019). These circumstances may foster the need to build new relationships, maintain distant ties, negotiate cultural identities, and find support, but the same fundamental mechanisms might also be present in general adolescent populations. Hence, comparative research is needed to assert contextual uniqueness.

Finally, the framework narrows the application of Self-Determination Theory. Autonomy and competence are recognized as possible alternative pathways, especially in the areas of identity expression, self-presentation, feedback, and social efficacy. By focusing on the relatedness branch, this paper increases its theoretical coherence with its relational antecedents and social outcome but does not claim to be a complete SDT model. This qualification helps avoid the risk of over-exaggerating theoretical coverage.

7. Practical Implications

7.1. Recommendations Supported by Existing Evidence

Existing evidence suggests several practical strategies that schools may adopt to strengthen students' sense of belonging, perceived social support, and resilience. Schools may implement structured peer-mentoring and buddy programmes to facilitate social integration, particularly for newly enrolled and internationally mobile students. Collaborative learning activities, inclusive extracurricular programmes, and accessible counselling services may further promote supportive peer relationships and strengthen students' sense of belonging. These recommendations are grounded in existing evidence demonstrating that positive peer relationships and school belonging are associated with improved adolescent adjustment and well-being (Alsarrani et al. 2022; Brisson et al. 2024; King et al. 2024; McKeering et al. 2021).

Digital citizenship education should extend beyond reducing screen time by promoting responsible, supportive, and relationship-oriented online engagement. Schools may encourage respectful communication, help-seeking behaviors, cyberbullying awareness, digital privacy, and the constructive use of technology to maintain meaningful interpersonal relationships. Such initiatives should be developmentally appropriate and aligned with institutional safeguarding policies (Agyapong-Opoku et al. 2025; Valkenburg et al. 2022; West et al. 2024).

Malaysian international secondary schools may also benefit from strengthening culturally responsive educational practices. Orientation programmes, inclusive classroom environments, culturally sensitive pastoral support, multilingual communication where appropriate, and collaborative learning opportunities may facilitate positive peer interaction across diverse cultural backgrounds. These initiatives have the potential to promote social

inclusion and strengthen students' sense of belonging within culturally diverse school communities (Bailey 2015; Hölscher et al. 2024; Velarde and Ghani 2019).

7.2. Framework-Derived Implications Requiring Empirical Testing

The integrated framework suggests—but does not yet prove—that interventions may be more effective when they address relatedness, perceived support, and resilience together. For example, a peer-belonging programme could be combined with clear support pathways and coping or relationship-repair skills. Schools should treat this as a testable programme theory and evaluate mediator change rather than assuming that every component is necessary or effective.

The moderator propositions also point to the possible importance of culturally and gender-responsive tailoring. But schools should not stereotype students or allocate support based on broad demographic categories. Needs assessment, student voice, subgroup analysis, and inclusive options are preferable. Any intervention ensuing from the framework should be piloted, ethically reviewed, and assessed for benefits, unintentional harms, accessibility, and differential effects.

8. Limitations

This paper has several limitations. First, it is a structured conceptual review rather than a systematic review or meta-analysis. The purposive and iterative search supported theory development, but it does not guarantee exhaustive coverage and is vulnerable to selection and interpretive bias. No formal risk-of-bias assessment or quantitative effect synthesis was conducted. The propositions therefore reflect a reasoned synthesis of the selected literature rather than population-level estimates.

Second, the framework has not been empirically tested. The proposed ordering of antecedents, mediators, moderators, and social well-being cannot establish causality, and reciprocal pathways are plausible. Common-method bias, construct overlap, and cross-sectional mediation could produce misleading support if the model is tested only through a single self-report survey. Longitudinal, multi-informant, behavioral, and multilevel evidence is required.

Third, the evidence base is uneven across pathways and contexts. Research on friendship quality and perceived support is more established than research specifically connecting meaningful social media use with resilience or social well-being. Malaysian international-school evidence is comparatively limited, so some contextual arguments draw on studies from other international-school or multicultural settings. The framework should consequently be treated as context-sensitive, not context-validated.

Fourth, the framework necessarily simplifies several multidimensional and dynamic constructs. Social media platforms and their affordances evolve rapidly, cultural identity is multifaceted and may change over time, and gender may not be adequately represented through binary classifications. The framework also excludes potentially relevant influences such as autonomy, competence, family functioning, school climate, socioeconomic resources, personality, platform characteristics, and experiences of discrimination. Although parsimony facilitates empirical testing, it necessarily limits the explanatory scope of the framework.

9. Future Research Directions

An initial priority is rigorous empirical comparison of alternative models. Longitudinal studies need to consider temporal ordering and reciprocal effects, multilevel studies need to separate student-level associations from classroom diversity climate and school-level support systems, and cross-cultural studies need to examine measurement invariance

before comparing path coefficients. Rather than only testing the most propitious model for the propositions, parallel, serial, direct, and adverse pathways should be examined.

Social media research needs to examine specific affordances and episodes such as directed messaging, public posting, friendship maintenance, online support, passive browsing, social comparison, algorithmic exposure, cyberbullying, and emotional dependence. Experience-sampling and person-specific analyses can identify for whom and under what circumstances online interaction improves or harms social functioning. Platform type should not be treated as a stable proxy for interaction quality.

Broader unanswered questions extend beyond validating the framework. Research should examine how repeated school mobility changes friendship formation and digital continuity; whether host-country and expatriate students experience inclusion differently; how language proficiency and curriculum transitions shape access to support; and whether cultural identity compatibility with the school climate protects students during transition. Qualitative interviews and participatory methods can reveal mechanisms that predefined survey scales may miss.

Intervention studies are needed to test whether peer-mentoring, belonging, resilience, counselling and digital-citizenship programs alter the proposed mediators and social well-being. Effectiveness could be evaluated using cluster randomised or strong quasi-experimental designs, and implementation research should measure feasibility, cultural responsiveness, staff capacity and unintended consequences. Student voice should inform programme design, particularly for mobile and culturally minoritised groups.

Future theory development should also compare the present relatedness-focused model with broader accounts that include autonomy and competence, school climate, family support, and discrimination. Researchers should test whether resilience is serial to perceived support, whether social well-being feeds back into relationship quality and online behavior, and whether gender and cultural identity moderate paths and not the model as a whole; these questions can move the field from a static framework to a dynamic developmental account.

10. Conclusions

This conceptual review offers an integrated framework that connects peer relationship quality and meaningful social media use to social well-being among students in Malaysian international secondary schools. The framework combines the relatedness branch of Self-Determination Theory, the resource-exchange logic of Social Exchange Theory and resilience as an adaptive process. Relatedness need satisfaction, perceived social support and psychological resilience are positioned as separate mediators and gender and cultural identity are proposed as contextual boundary conditions.

The contribution of the framework is in the arrangement of established and emerging evidence into a context-sensitive, testable model, rather than in the empirical validation of its 13 propositions. The mechanisms may be relevant to adolescents more broadly, while characteristics of international schools may influence their salience and strength. The model therefore provides a basis for comparative research, rather than a claim of Malaysian distinctiveness.

By clarifying its review method, theoretical boundaries, evidentiary base, contextual rationale, practical caution, and limitations, the revised framework provides a stronger foundation for longitudinal, multilevel, cross-cultural, and intervention studies. Its value will ultimately depend on transparent empirical testing and on whether it improves understanding and support of adolescents' social functioning in diverse educational environments.

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Abbreviations

The following abbreviations are used in this manuscript:

SDT Self-Determination Theory
SET Social Exchange Theory

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