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Perceived social support, self-esteem, sense of mastery, and mental health among Vietnamese secondary school students

BACKGROUND

Perceived social support is associated with adolescent mental health, but the pathways linking support with positive functioning and psychological problems remain insufficiently examined in Vietnamese schools. This study examined associations among support from family and friends, self-esteem, sense of mastery, life satisfaction, and internalizing and externalizing problems. It also tested self-esteem and sense of mastery as parallel statistical mediators.

PARTICIPANTS AND PROCEDURE

A cross-sectional survey included 375 students in Grades 8–11 from lower- and upper-secondary schools in Hanoi, Vietnam. Participants completed translated self-report measures. Descriptive statistics and Pearson correlations were calculated in SPSS, while direct and specific indirect associations were estimated using partial least squares structural equation modeling with 5,000 bootstrap resamples.

RESULTS

Social support was positively associated with self-esteem, sense of mastery, and life satisfaction and negatively associated with internalizing and externalizing problems.

Self-esteem was positively associated with life satisfaction and negatively associated with both problem domains. Sense of mastery was negatively associated with internalizing and externalizing problems but was not significantly associated with life satisfaction. Self-esteem showed statistical partial mediation of the associations between social support and all three outcomes. Sense of mastery showed statistical partial mediation of the associations between social support and internalizing and externalizing problems, but not life satisfaction.

CONCLUSIONS

Self-esteem showed a broader indirect role across positive functioning and psychological problems, whereas sense of mastery was specifically associated with fewer internalizing and externalizing problems. The findings may inform school- and family-based efforts to strengthen supportive relationships, positive self-evaluation, and students' perceived capacity to manage difficulties.

KEY WORDS

social support; self-esteem; mastery; life satisfaction; mental health

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TO CITE THIS ARTICLE – Do, L. H. T., Phan, M. H. T., Dinh, H. V. T., Nguyen, P. H. T., Pham, T. M., Luu, L. T., & Hoang, T. H. T. (2026). Perceived social support, self-esteem, sense of mastery, and mental health among Vietnamese secondary school students. *Health Psychology Report*. <https://doi.org/10.5114/hpr/235862>

RECEIVED 10.05.2026 · REVIEWED 22.06.2026 · ACCEPTED 31.08.2026 · ONLINE PUBLICATION 05.10.2026



BACKGROUND

Mental health among school students involves both positive psychological functioning and psychological difficulties (Bersia et al., 2022; Clark & Malecki, 2022; Suldo et al., 2016). Dual-factor perspectives propose that well-being and psychopathology are related but distinct components of mental health (Antaramian et al., 2010; Bersia et al., 2022; Clark et al., 2024; Suldo & Shaffer, 2008). Accordingly, the absence of emotional or behavioral symptoms does not necessarily indicate high well-being, and the presence of some difficulties does not always imply an absence of positive functioning (Antaramian et al., 2010; Bersia et al., 2022; Suldo & Shaffer, 2008; Suldo et al., 2016). Considering both components provides a more comprehensive understanding of students' mental health than focusing only on symptoms or problems (Antaramian et al., 2010; Clark et al., 2024; Clark & Malecki, 2022; Lyons et al., 2013). In the present study, mental health was operationalized through three complementary outcomes rather than modeled as a single higher-order construct. Life satisfaction represented the positive component and referred to students' overall evaluation of the quality of their lives (Bersia et al., 2022; Cavioni et al., 2021). Internalizing problems represented inwardly directed difficulties, including emotional symptoms and peer relationship problems, whereas externalizing problems represented outwardly expressed difficulties, including conduct problems and hyperactivity/inattention (Goodman et al., 2010). Together, these outcomes provided indicators of positive functioning and psychological problems in student mental health (Bersia et al., 2022; Clark & Malecki, 2022; Lyons et al., 2013). They did not represent an exhaustive assessment of mental health and were not used to establish clinical diagnoses.

Mental health concerns among Vietnamese adolescents have been documented across national and school-based studies. The Viet Nam Adolescent Mental Health Survey reported that 21.7% of adolescents aged 10 to 17 years experienced a mental health problem during the preceding 12 months, while 3.3% met the criteria for a mental disorder. Anxiety was the most commonly reported problem, followed by depression. Despite this level of need, only a small proportion of adolescents with mental health problems had accessed services providing support or counseling for emotional and behavioral difficulties (Institute of Sociology et al., 2022). Earlier research with Vietnamese secondary school students also identified substantial levels of anxiety, depression, and suicidal ideation, with educational stress and adverse family experiences emerging as relevant correlates (Nguyen et al., 2013). Research in Vietnam has also begun to examine positive psychological functioning and potentially protective resources. Nguyen

et al. (2019) found that low self-esteem was associated with higher anxiety, depression, and suicidal ideation among secondary school students. Dam et al. (2023) reported that self-esteem, family support, and resilience were associated with adolescents' life satisfaction and mental well-being. Other studies have connected social support with fewer emotional and behavioral difficulties (Nguyen, 2024) and have examined life satisfaction together with emotional and behavioral problems in models involving self-compassion (Nguyen & Nguyen, 2023). These findings demonstrate growing attention to both positive and negative aspects of adolescent mental health in Vietnam. However, the available Vietnamese literature has generally examined well-being, psychological problems, and personal resources in separate studies or has focused on mechanisms other than sense of mastery. Within the literature reviewed for the present study, no study simultaneously examined perceived support from family and friends, self-esteem, sense of mastery, life satisfaction, and both internalizing and externalizing problems in one parallel mediation model. Consequently, it remains unclear whether self-esteem and sense of mastery play similar or distinct roles across positive well-being and psychological problems among Vietnamese secondary school students.

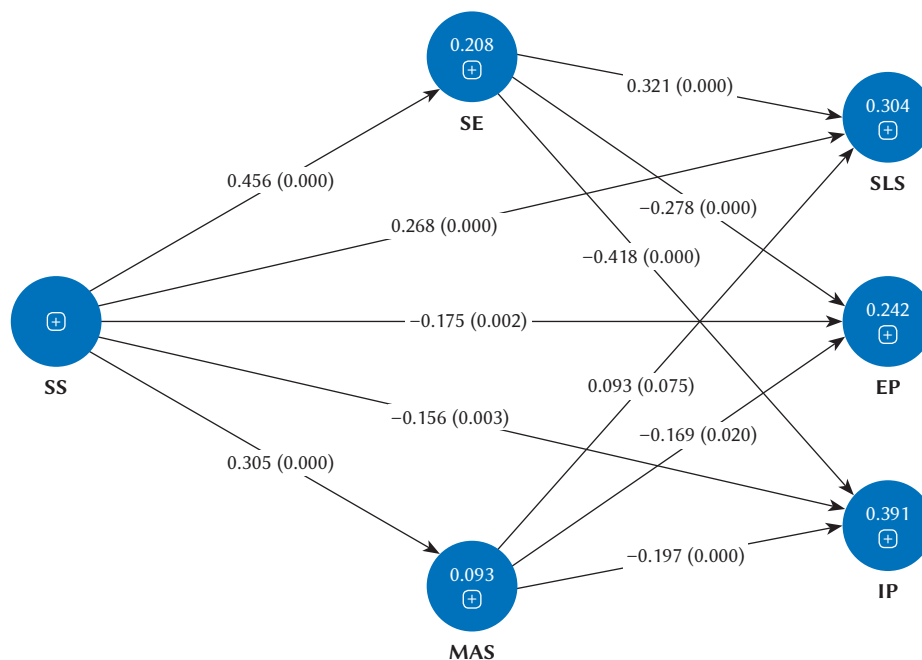
Within this context, social support represents an important interpersonal resource associated with the student mental health outcomes examined in this study. Previous studies have shown that support from family, peers, and school staff is closely associated with better mental health and a lower risk of poor well-being, even among students facing adversity or lacking support at home (Butler et al., 2022; Phan et al., 2025; Stewart & Suldo, 2011; Yanagi, 2024). Social support is also linked to lower levels of depression, anxiety, and loneliness, while fostering better mental health and higher life satisfaction (Pan et al., 2024; Pontes et al., 2024; Stewart & Suldo, 2011; Yanagi, 2024). Beyond psychological benefits, social support contributes to stronger academic engagement and greater resilience. When students receive encouragement from peers and teachers, they tend to feel more motivated, show less doubt about their abilities, and achieve higher academic outcomes, particularly during critical school transitions (Phan et al., 2025). Moreover, social support reduces the likelihood of school dropout, alleviates burnout, and limits problematic behaviors such as bullying or impulsivity (Bussemakers & Denessen, 2023; Kim et al., 2018; Samuel & Burger, 2020). Importantly, by strengthening self-esteem and emotion regulation, social support also protects students from social anxiety and the risk of internet addiction (Mo et al., 2018; Pan et al., 2024).

Self-esteem and sense of mastery represent related but conceptually distinct psychological resources.

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Figure 1

Estimated parallel mediation model



*Social support
and adolescent
mental health*

Note. SS – perceived social support from family and friends; SE – self-esteem; MAS – sense of mastery; SLS – life satisfaction; EP – externalizing problems; IP – internalizing problems. Values on the paths are standardized path coefficients (β). Values inside the endogenous constructs are R^2 .

Self-esteem concerns students' overall evaluation of their personal worth, whereas sense of mastery concerns their belief that they can influence important circumstances and outcomes in their lives (Pearlin & Schooler, 1978; Rosenberg, 1979). In the present study, the term sense of mastery is used in this latter sense, consistent with the Pearlin Mastery Scale, and does not refer to mastery goals or mastery orientation in achievement settings. Examining both resources within the same parallel mediation model allows their distinct indirect associations to be estimated while accounting for their overlap. It also helps clarify whether perceived social support from family and friends is related to the three student mental health outcomes through feeling valued, through feeling able to influence life circumstances, or through both pathways.

Social support and self-esteem are closely interconnected and mutually reinforcing among secondary school students, forming a vital foundation for their psychosocial development. When students receive higher levels of support from family, peers, and teachers, they tend to develop and maintain higher self-esteem, which in turn enhances their sense of happiness, confidence, resilience, and success in both academic and personal domains. Numerous studies have demonstrated that social support from parents, teachers, and peers directly contributes to improving students' self-esteem across various age groups and cultural contexts (Saeed et al., 2023; Shi, 2022;

Tian et al., 2013). Notably, the type of support most strongly associated with self-esteem may vary by developmental stage: parental and teacher support play a more prominent role for younger students, whereas peer and teacher support become more significant for older students (Tian et al., 2013). Therefore, the following hypothesis is proposed:

H1: Social support would be positively associated with students' self-esteem.

Social support may also be associated with a stronger sense of mastery. Supportive relationships with family and friends can provide guidance, reassurance, and practical assistance that make difficulties appear more manageable and reinforce adolescents' belief that their responses can influence outcomes. Longitudinal evidence suggests that supportive parenting and constructive family problem-solving may contribute to the development of mastery during adolescence (Conger et al., 2009; Surjadi et al., 2011). Therefore, the following hypothesis is proposed:

H2: Social support would be positively associated with students' sense of mastery.

Social support is closely and consistently associated with life satisfaction among secondary school students, as these sources of support help them feel valued, heard, and provided with a reliable foundation to cope with stress, thereby potentially supporting both physical and mental health. Among these sources, family support has been reported to be particularly strongly associated with adolescents' life satisfac-

tion, even surpassing support from peers, classmates, or teachers (Brisson et al., 2024; Piko, 2023). In addition, other sources such as peers, classmates, and teachers also play an essential role in students' life satisfaction, particularly at younger ages when students need greater encouragement and companionship within the school environment (Liu et al., 2016; Vidić, 2024). Therefore, the following hypothesis is proposed:

H3: Social support would be positively associated with students' life satisfaction.

Social support is consistently associated with fewer internalizing and externalizing problems. Numerous studies have demonstrated that support from mothers, fathers, classmates, and close friends is significantly associated with reduced internalizing problems in both male and female students. In particular, evidence suggests that parental support can partly compensate for a lack of support from classmates, especially for male students, thereby potentially alleviating symptoms of anxiety and depression (Lyell et al., 2020). In addition, support from classmates and peers may be associated with fewer internalizing problems, partly by reducing experiences of bullying, as a positive peer environment can decrease the likelihood of such difficulties (Attar-Schwartz et al., 2019; Davidson & Demaray, 2007). Encouragement and companionship from teachers, peers, and the school community may also help mitigate the negative impact of bullying and victimization, which may be particularly beneficial for male students in reducing internalized stress (Davidson & Demaray, 2007).

Regarding externalizing problems, parental support has been identified as an important correlate of reduced aggressive tendencies and rule-breaking behaviors. While support from classmates may not be directly associated with externalizing problems, it may indirectly relate to lower peer victimization, thereby reducing the risk of negative behavioral manifestations (Attar-Schwartz et al., 2019). Furthermore, early social support, particularly from parents, may buffer the effects of parental psychological distress or suboptimal parenting styles on later externalizing problems (Heberle et al., 2015). In addition, support from teachers and peers has also been identified as an independent predictor of fewer externalizing problems, although parental support remains the most influential factor (Stewart & Suldo, 2011). Therefore, the following hypothesis is proposed:

H4: Social support would be negatively associated with students' internalizing and externalizing problems.

Self-esteem is closely and positively associated with life satisfaction among secondary school students, highlighting its role as an important psychological resource that may be relevant to personal happiness and healthy development. A substantial body of research consistently shows that students

with higher self-esteem tend to report greater life satisfaction, whereas those with lower self-esteem often experience reduced satisfaction with their lives (Garnique-Hinostroza et al., 2024; Vilca-Pareja et al., 2022). This relationship has been found to be consistent across various cultures, age groups, and educational settings, underscoring the broad relevance of self-esteem to students' mental well-being. Notably, some studies have further indicated that self-esteem alone can account for a significant proportion of the variance in life satisfaction, sometimes showing a stronger association than many other psychological factors or personality traits (Garnique-Hinostroza et al., 2024; Vilca-Pareja et al., 2022). Because social support may strengthen adolescents' sense of personal worth, and self-esteem is positively associated with life satisfaction, self-esteem may partly account for the association between social support and life satisfaction (Aslan, 2024; Moksnes & Espnes, 2013). Therefore, the following hypotheses are proposed:

H5: Self-esteem would be positively associated with students' life satisfaction.

H6: Self-esteem would statistically mediate the positive association between social support and students' life satisfaction.

Self-esteem is closely associated with both internalizing and externalizing problems and may be an important psychological factor in students' adaptation and development. A consistent body of research has shown that low self-esteem is strongly linked to higher levels of both problem domains, even after controlling for variables such as age, gender, and academic ability (Boyes et al., 2020; Irvine et al., 2022; Lee & Feng, 2021; Metsäpelto et al., 2020). Among students with low self-esteem, difficulties in regulating emotions and forming positive peer relationships often occur simultaneously, and may be associated with anxiety, depression, and oppositional or disruptive behaviors (Boyes et al., 2020; Lee & Feng, 2021). In contrast, higher self-esteem is associated with greater confidence, emotional stability, and healthier social relationships, which may in turn be associated with fewer internalizing and externalizing problems. Taken together, these relationships are consistent with an indirect model in which social support is associated with fewer internalizing and externalizing problems partly through higher self-esteem (Liang et al., 2026; Zhang et al., 2021). Therefore, the following hypotheses are proposed:

H7: Self-esteem would be negatively associated with students' internalizing and externalizing problems.

H8: Self-esteem would statistically mediate the negative associations between social support and students' internalizing and externalizing problems.

A stronger sense of mastery may be associated with higher life satisfaction because adolescents who perceive greater personal control may appraise difficulties as more manageable and view future outcomes

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as more responsive to their own actions. Research with adolescent and youth samples has linked sense of mastery with life satisfaction and broader mental health (Caputo, 2003; Sam, 1998). Because supportive relationships may strengthen adolescents' sense of mastery, sense of mastery may also partly account for the association between social support and life satisfaction. Therefore, the following hypotheses are proposed:

H9: Students' sense of mastery would be positively associated with their life satisfaction.

H10: Students' sense of mastery would statistically mediate the positive association between social support and life satisfaction.

Sense of mastery may also be relevant to internalizing and externalizing problems. A stronger perception of personal control may be associated with more adaptive coping and less helplessness when adolescents face stress, whereas a lower sense of mastery has been associated with poorer mental health and greater depressive symptoms among youth (Assari & Caldwell, 2017; Caputo, 2003). Evidence is more established for internalizing symptoms, but perceived control may also be associated with better behavioral regulation and fewer externalizing difficulties (Cherewick et al., 2025; Flores et al., 2020). Accordingly, sense of mastery may represent one indirect pathway linking social support with fewer emotional and behavioral problems. Therefore, the following hypotheses are proposed:

H11: Students' sense of mastery would be negatively associated with their internalizing and externalizing problems.

H12: Students' sense of mastery would statistically mediate the negative associations between social support and internalizing and externalizing problems.

Taken together, the literature indicates three related gaps. First, Vietnamese studies have more often examined positive functioning or psychological problems separately rather than considering both within a common framework. Second, although self-esteem has received increasing attention, sense of mastery, conceptualized as perceived personal control, remains underexamined among Vietnamese secondary school students. Third, it remains unclear whether self-esteem and sense of mastery represent similar or distinct indirect pathways between social support and different mental health outcomes. Addressing these gaps is important because a psychological resource associated with positive life evaluation may not operate in the same way for emotional and behavioral difficulties. Accordingly, the present study addressed the following overarching research questions: (RQ1) How is perceived social support from family and friends associated with self-esteem, sense of mastery, life satisfaction, internalizing problems, and externalizing problems among Vietnamese secondary school students? (RQ2) Do self-esteem and

sense of mastery show distinct parallel indirect associations between perceived social support and life satisfaction, internalizing problems, and externalizing problems? The directional hypotheses presented above specified the individual paths used to address these research questions. By examining positive functioning and two broad problem domains within the same model, the study aimed to provide a more integrated account of student mental health and to clarify the distinct roles of self-worth and perceived personal control in the Vietnamese school context.

PARTICIPANTS AND PROCEDURE

PARTICIPANTS AND RESEARCH DESIGN

This study used a quantitative, cross-sectional design and a school-based convenience sampling procedure. The research team contacted accessible lower- and upper-secondary schools in Hanoi through its professional network. After school-level permission had been obtained, designated school contacts identified eligible classes and assisted in providing students and their parents or legal guardians with information about the study. Parents or legal guardians were informed about the study and agreed to their child's participation. Students in the identified classes were invited to participate if they (a) were enrolled in Grades 8 to 11, (b) could read and understand Vietnamese, (c) their parent or legal guardian had agreed to their participation, and (d) they provided voluntary verbal assent after receiving age-appropriate information about the study. Students who declined participation or did not complete the main questionnaire sections were not included in the analytic sample.

The participating institutions included both lower- and upper-secondary schools located in Hanoi. The exact number, names, school-sector classifications, and district-level locations are not reported because the combination of these characteristics could permit deductive identification of the participating institutions and conflict with the confidentiality conditions under which access was granted. Grades 8 to 11 were selected to balance developmental suitability and practical feasibility. Students in Grades 6 and 7 were not included because of their younger age, whereas Grade 12 students were not recruited because they were preparing for graduation and university entrance examinations. This grade range was also the most feasible within the research team's existing school network.

The final sample consisted of students born between 2008 and 2011. Based on age attained during 2024, participants were approximately 13 to 16 years old ($M = 14.45$, $SD = 1.15$). Of the 375 participants, 177 (47.2%) reported being male, 187 (49.9%) reported being female, and 11 (2.9%) did not report their

gender. The sample included 103 Grade 8 students (27.5%), 98 Grade 9 students (26.1%), 77 Grade 10 students (20.5%), and 97 Grade 11 students (25.9%).

DATA COLLECTION PROCEDURE

Data were collected between September and December 2024 at the participating schools. After institutional permission had been obtained from the school administrations, information about the study was announced to eligible classes. Parents or legal guardians were also informed about the study and agreed to their child's participation before survey administration. Students who wished to participate received age-appropriate information about the study purpose, procedures, voluntary nature of participation, confidentiality protections, and their right to withdraw. They indicated their verbal assent before completing the questionnaire. Students completed a paper-based self-administered questionnaire during a brief school-arranged session. The questionnaire required approximately 10 minutes to complete. Research team members and school staff were present to provide standardized instructions and answer procedural questions. They did not inspect individual responses, and students completed the questionnaire independently. Completed questionnaires were returned directly to the research team. Participation was voluntary, and students could decline participation or stop completing the questionnaire at any time without academic or other negative consequences.

The questionnaire consisted of three sections. The first section presented age-appropriate information about the study, including its purpose, procedures, voluntary nature, confidentiality protections, and the right to withdraw. Students who agreed to participate proceeded to the remaining sections. The second section contained standardized measures of perceived social support, self-esteem, sense of mastery, life satisfaction, and internalizing and externalizing problems. The final section collected demographic information, including year of birth, gender, and grade level.

MEASUREMENTS

Translation of the measures

Validated Vietnamese versions of the instruments were not used. Therefore, all measures were translated from English into Vietnamese and then back-translated into English by the research team. The original and back-translated English versions were compared, and differences in meaning or wording were discussed and resolved by consensus. This process was used to maintain the intended meaning of the items

while ensuring that the Vietnamese wording was understandable to secondary school students. This procedure represented linguistic translation and adaptation rather than a full cross-cultural validation of the instruments. The measurement properties of the translated measures were evaluated in the present sample through internal consistency estimates, indicator loadings, average variance extracted, and discriminant validity. Measurement invariance across cultural or language groups was not examined.

Operational roles of the measures

Consistent with the conceptualization presented in the Background, the Student's Life Satisfaction Scale and the broader Strengths and Difficulties Questionnaire (SDQ) domains were selected as complementary mental health outcomes. The life satisfaction scale assessed students' positive global evaluation of their lives, whereas the SDQ internalizing and externalizing domains assessed inwardly directed emotional and peer difficulties and outwardly expressed conduct and hyperactivity/inattention difficulties, respectively. These instruments were not treated as a diagnostic battery or as measures of a single school-specific latent construct. Instead, they represented indicators of positive functioning and psychological problems among school students.

Social support was modeled as an interpersonal resource, whereas self-esteem and sense of mastery were modeled as two related but distinct psychological resources and parallel mediators rather than as dimensions of mental health itself. Social support represented perceived support from family and friends, self-esteem represented students' global evaluation of their self-worth, and sense of mastery represented their perceived capacity to influence important life circumstances. Their relevance to the present study lies in their expected associations with how students manage emotional, behavioral, social, and developmental demands while attending school.

Social support. Perceived social support was assessed using eight items from the Multidimensional Scale of Perceived Social Support developed by Zimet et al. (1988). The original instrument contains 12 items across three subscales: Family Support, Friend Support, and Significant Other Support. The present study used the four-item Family Support and four-item Friend Support subscales because the study focused on support from these two clearly identifiable sources in students' daily lives. The Significant Other Support subscale was not included because the meaning of "significant other" may be interpreted inconsistently by adolescents and may overlap with support received from family members or friends. Items were rated on a 7-point scale ranging from 1 (*very strongly disagree*) to 7 (*very strongly agree*). The eight items were averaged, with higher

scores indicating greater perceived support from family and friends. The original scale demonstrated good internal consistency ($\alpha = .88$) and three-month test-retest reliability ($r = .85$) (Zimet et al., 1988). In the present study, the eight-item measure showed good internal consistency ($\alpha = .86$).

Self-esteem. The Rosenberg Self-Esteem Scale, developed by Rosenberg (1979), was used in this study to measure students' self-esteem. The original scale consists of 10 items, with Items 2, 5, 6, 8, and 9 reverse-coded before scoring. All items were rated on a 4-point Likert scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*), with higher mean scores indicating more positive self-esteem among students. The scale demonstrated good reliability in the original study, with Cronbach's $\alpha = .92$ (Rosenberg, 1979). In the present study, the scale showed adequate internal consistency ($\alpha = .79$).

Sense of mastery. Students' sense of mastery was assessed using the shortened five-item version of the Pearlin Mastery Scale developed by Pearlin and Schooler (1978) and described by Comijs et al. (2011). The measure assesses the extent to which individuals perceive that they can influence important circumstances and outcomes in their lives. Items were answered on a 5-point scale ranging from *strongly disagree* to *strongly agree*. Before analysis, negatively worded items were reverse-coded so that all item scores followed the same direction. After recoding, scores ranged from 1, indicating a lower sense of mastery, to 5, indicating a stronger sense of mastery. A mean score was calculated across the five items, with higher scores representing a stronger sense of mastery. The shortened scale showed modest internal consistency in the previous study ($\alpha = .67$; Penninx et al., 1998). In the present study, internal consistency was adequate ($\alpha = .78$).

Student's life satisfaction. The Student's Life Satisfaction Scale, developed by Huebner (1991), was used in this study to measure students' life satisfaction. The original scale consists of seven items. Items were rated on a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Items 3 and 4 were reverse-coded before the item scores were averaged, with higher mean scores indicating greater life satisfaction. The scale demonstrated good internal consistency in the original study ($\alpha = .82$; Huebner, 1991). In the present study, internal consistency was adequate ($\alpha = .77$).

Internalizing and externalizing problems. Internalizing and externalizing problems were assessed using the Strengths and Difficulties Questionnaire developed by Goodman (1997). The full questionnaire contains 25 items across five subscales: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems, and prosocial behavior. Following the broader scoring approach described by Goodman et al. (2010), the present study used

20 items to calculate two problem domains. The internalizing problems domain combined the emotional symptoms and peer relationship problems subscales, whereas the externalizing problems domain combined the conduct problems and hyperactivity/inattention subscales. The prosocial behavior subscale was not included because it does not form part of either problem domain. Items were rated on a 3-point scale: 0 (*not true*), 1 (*somewhat true*), and 2 (*certainly true*). Positively worded items were reverse-coded before the domain scores were calculated so that higher scores consistently represented greater difficulties. A mean score was calculated separately for the 10 internalizing items and the 10 externalizing items. In the present sample, internal consistency was modest for both externalizing problems ($\alpha = .61$) and internalizing problems ($\alpha = .66$).

DATA ANALYSIS

After data collection, the dataset was cleaned, coded, and entered into statistical software for analysis. First, SPSS was used to conduct descriptive statistical analyses, including frequencies, percentages, means, and standard deviations, to provide an overview of the sample characteristics and response patterns for each observed variable. In addition, SPSS was employed to calculate Pearson correlation coefficients among the key variables in the model, offering preliminary information about the linear associations between them.

Subsequently, to test the research model and hypotheses, SmartPLS was used with the partial least squares structural equation modeling (PLS-SEM) approach. The analysis procedure included two main steps: (1) assessing the measurement model by examining reliability (composite reliability, Cronbach's alpha), convergent validity (average variance extracted, AVE), and discriminant validity; and (2) evaluating the structural model to estimate the direct and indirect associations among the study constructs, including direct and specific indirect associations.

Statistical significance was assessed using bootstrapping with 5,000 resamples to obtain p values and 95% confidence intervals. The structural model was further evaluated using inner variance inflation factor (VIF) values, R^2 and adjusted R^2 , and f^2 effect sizes. The significance level was set at $\alpha = .05$.

RESULTS

DESCRIPTIVE STATISTICS

Descriptive statistics and bivariate correlations are presented in Table 1. Social support was positively correlated with self-esteem, sense of mastery, and

life satisfaction, and negatively correlated with externalizing and internalizing problems. Self-esteem and sense of mastery were positively correlated with life satisfaction and negatively correlated with both problem domains. Externalizing and internalizing problems were positively correlated, $r = .52$, $p < .001$.

MEASUREMENT MODEL ASSESSMENT

Table 2 presents the indicator loadings, internal consistency estimates, and average variance extracted for the study constructs. Cronbach's α values ranged from .61 to .86 (DeVellis & Thorpe, 2022), and composite

Table 1

Descriptive statistics and correlations among study variables

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. SS	5.15	1.22	–	.37***	.30***	.43***	–.35***	–.40***
2. SE	2.56	0.52		–	.44***	.44***	–.33***	–.51***
3. MAS	3.05	0.85			–	.32***	–.32***	–.37***
4. SLS	4.10	0.91				–	–.39***	–.42***
5. EP	0.70	0.30					–	.52***
6. IP	0.72	0.33						–

Note. $N = 375$. SS – perceived social support from family and friends; SE – self-esteem; MAS – sense of mastery; SLS – life satisfaction; EP – externalizing problems; IP – internalizing problems. *** $p < .001$.

Table 2

Summary of outer loadings, reliability, and average variance extracted

Indicator	Loading	<i>t</i>	Cronbach's α	Composite reliability	AVE
Social support			.86	.886	.495
SS1 $\leftarrow$ SS	.711	20.34			
SS2 $\leftarrow$ SS	.788	25.13			
SS3 $\leftarrow$ SS	.725	17.92			
SS4 $\leftarrow$ SS	.652	13.34			
SS5 $\leftarrow$ SS	.694	19.17			
SS6 $\leftarrow$ SS	.636	12.45			
SS7 $\leftarrow$ SS	.784	28.95			
SS8 $\leftarrow$ SS	.616	11.72			
Self-esteem			.79	.832	.346
SE1 $\leftarrow$ SE	.701	21.57			
SE2R $\leftarrow$ SE	.384	4.37			
SE3 $\leftarrow$ SE	.605	12.86			
SE4 $\leftarrow$ SE	.558	10.54			
SE5R $\leftarrow$ SE	.630	9.75			
SE6R $\leftarrow$ SE	.518	6.74			
SE7 $\leftarrow$ SE	.637	13.81			
SE8R $\leftarrow$ SE	.237	2.93			
SE9R $\leftarrow$ SE	.701	14.12			
SE10 $\leftarrow$ SE	.721	22.45			

Table 2 continues

Table 2

Table 2 continued

Indicator	Loading	<i>t</i>	Cronbach's α	Composite reliability	AVE
Mastery			.78	.853	.539
MAS1 $\leftarrow$ MAS	.677	17.01			
MAS2 $\leftarrow$ MAS	.797	29.53			
MAS3 $\leftarrow$ MAS	.729	20.13			
MAS4 $\leftarrow$ MAS	.816	40.50			
MAS5 $\leftarrow$ MAS	.638	14.21			
Student's life satisfaction			.77	.840	.453
SLSS1 $\leftarrow$ SLSS	.863	45.67			
SLSS2 $\leftarrow$ SLSS	.837	30.30			
SLSS3R $\leftarrow$ SLSS	.207	2.23			
SLSS4R $\leftarrow$ SLSS	.535	8.01			
SLSS5 $\leftarrow$ SLSS	.783	21.31			
SLSS6 $\leftarrow$ SLSS	.628	11.48			
SLSS7 $\leftarrow$ SLSS	.623	12.60			
Externalizing problems			.61	.723	.253
SDQ1_EX $\leftarrow$ EP	.552	8.97			
SDQ3_EX $\leftarrow$ EP	.649	13.33			
SDQ5R_EX $\leftarrow$ EP	-.151	1.73			
SDQ7_EX $\leftarrow$ EP	.666	14.15			
SDQ9_EX $\leftarrow$ EP	.278	2.96			
SDQ12_EX $\leftarrow$ EP	.652	15.37			
SDQ14_EX $\leftarrow$ EP	.632	12.88			
SDQ16R_EX $\leftarrow$ EP	.373	4.56			
SDQ17_EX $\leftarrow$ EP	.330	3.61			
SDQ20R_EX $\leftarrow$ EP	.439	5.61			
Internalizing problems			.66	.757	.277
SDQ2_IN $\leftarrow$ IP	.529	10.63			
SDQ4_IN $\leftarrow$ IP	.518	9.70			
SDQ6_IN $\leftarrow$ IP	.725	21.30			
SDQ8R_IN $\leftarrow$ IP	.201	2.58			
SDQ10_IN $\leftarrow$ IP	.716	21.21			
SDQ11R_IN $\leftarrow$ IP	.398	6.30			
SDQ13_IN $\leftarrow$ IP	.527	9.83			
SDQ15_IN $\leftarrow$ IP	.380	6.11			
SDQ18_IN $\leftarrow$ IP	.006	0.08			
SDQ19_IN $\leftarrow$ IP	.751	24.25			

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Note. SS – perceived social support from family and friends; SE – self-esteem; MAS – sense of mastery; SLSS – Student's Life Satisfaction Scale; EP – externalizing problems; IP – internalizing problems; R – reverse-coded indicator; AVE – average variance extracted.

reliability values ranged from .723 to .886 (Hair et al., 2021). Indicator loadings varied considerably, ranging from $-.151$ to $.863$. Several indicators had low loadings, including reverse-coded items from the self-esteem, life satisfaction, and SDQ measures.

Sense of mastery met the conventional AVE criterion, with an AVE of .539, while social support was close to the criterion, with an AVE of .495. The AVE values for self-esteem, life satisfaction, externalizing problems, and internalizing problems ranged from .253 to .453. Thus, convergent validity was supported for mastery, was marginal for social support, and was not established for the remaining constructs based on AVE. The constructs were retained because they represented the prespecified theoretical measures, although the low indicator loadings and AVE values indicate limitations in their measurement performance in the present sample (Hock & Ringle, 2010). Before the final model was estimated, the scoring direction and reverse coding of all indicators were rechecked against the original scoring instructions, and no coding errors were identified. Indicators with low loadings were also examined through iterative deletion checks. Removing these indicators did not materially improve composite reliability or raise the AVE values to acceptable levels, while it reduced the coverage of the constructs represented by the original item sets. The prespecified indicators were therefore retained to preserve content validity and comparability with the established scoring structures. The low indicator loadings and AVE values indicate limitations in measurement performance in the present sample.

As shown in Table 3, heterotrait-monotrait ratio (HTMT) values ranged from .361 to .900. Most construct pairs were below the conventional thresholds (Henseler et al., 2015). However, the HTMT value between externalizing and internalizing problems was .900, which was at the upper boundary of the criterion. This result indicates that the two domains were closely related and showed only borderline empirical

separation, although they were retained as theoretically distinct dimensions of student difficulties.

STRUCTURAL MODEL ASSESSMENT

Assessment of the structural model showed that the inner VIF values ranged from 1.03 to 3.11, indicating no substantial collinearity among the predictor constructs (Hair et al., 2019). Social support, self-esteem, and sense of mastery jointly explained 30.4% of the variance in life satisfaction ($R^2 = .304$, adjusted $R^2 = .298$), 24.2% of the variance in externalizing problems ($R^2 = .242$, adjusted $R^2 = .236$), and 39.1% of the variance in internalizing problems ($R^2 = .391$, adjusted $R^2 = .386$). The f^2 values ranged from .010 to .263 (Cohen, 1988).

Table 4 presents the direct structural associations. Social support was positively associated with self-esteem, sense of mastery, and life satisfaction, and negatively associated with externalizing and internalizing problems. Self-esteem was positively associated with life satisfaction and negatively associated with both problem domains. Sense of mastery was negatively associated with externalizing and internalizing problems, but its association with life satisfaction was not statistically significant, $\beta = .09$, $p = .081$.

Table 5 presents the specific indirect associations. The indirect paths from social support through self-esteem to life satisfaction, externalizing problems, and internalizing problems were statistically significant. Because the corresponding direct paths from social support to these three outcomes also remained significant, the results were consistent with partial mediation through self-esteem.

The indirect paths from social support through sense of mastery to externalizing and internalizing problems were also significant, while the corresponding direct paths remained significant. These patterns were consistent with statistical partial mediation through sense of mastery. In contrast, the indirect

Table 3

Heterotrait-monotrait ratios (HTMT) among study constructs

	1	2	3	4	5	6
1. SS	–	.477	.361	.519	.547	.450
2. SE		–	.564	.579	.723	.570
3. MAS			–	.405	.565	.455
4. SLS				–	.600	.540
5. EP					–	.900
6. IP						–

Note. SS – perceived social support from family and friends; SE – self-esteem; MAS – sense of mastery; SLS – life satisfaction; EP – externalizing problems; IP – internalizing problems.

Table 4*Summary of direct structural associations*

Path	β	p	95% CI	
			Lower bound	Upper bound
SS $\rightarrow$ SE	.46	< .001	.378	.541
SS $\rightarrow$ MAS	.31	< .001	.200	.411
SS $\rightarrow$ SLS	.27	< .001	.158	.384
SS $\rightarrow$ EP	-.18	.002	-.292	-.065
SS $\rightarrow$ IP	-.16	.002	-.255	-.058
SE $\rightarrow$ SLS	.32	< .001	.201	.438
SE $\rightarrow$ EP	-.28	< .001	-.403	-.151
SE $\rightarrow$ IP	-.42	< .001	-.518	-.320
MAS $\rightarrow$ SLS	.09	.081	-.013	.199
MAS $\rightarrow$ EP	-.17	.018	-.317	-.037
MAS $\rightarrow$ IP	-.20	< .001	-.295	-.108

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Note. SS – perceived social support from family and friends; SE – self-esteem; MAS – sense of mastery; SLS – life satisfaction; EP – externalizing problems; IP – internalizing problems. β values are standardized PLS-SEM path coefficients. Confidence intervals were obtained from 5,000 bootstrap samples.

Table 5*Summary of specific indirect associations*

Path	β	p	95% CI	
			Lower bound	Upper bound
SS $\rightarrow$ SE $\rightarrow$ SLS	.15	< .001	.090	.212
SS $\rightarrow$ SE $\rightarrow$ EP	-.13	< .001	-.196	-.068
SS $\rightarrow$ SE $\rightarrow$ IP	-.19	< .001	-.254	-.141
SS $\rightarrow$ MAS $\rightarrow$ SLS	.03	.106	-.004	.066
SS $\rightarrow$ MAS $\rightarrow$ EP	-.05	.045	-.111	-.010
SS $\rightarrow$ MAS $\rightarrow$ IP	-.06	.002	-.106	-.028

Note. SS – perceived social support from family and friends; SE – self-esteem; MAS – sense of mastery; SLS – life satisfaction; EP – externalizing problems; IP – internalizing problems. β values are standardized PLS-SEM path coefficients. Confidence intervals were obtained from 5,000 bootstrap samples.

path from social support through sense of mastery to life satisfaction was not statistically significant, $\beta = .03$, $p = .106$, 95% CI [- .004, .066].

DISCUSSION

MAIN FINDINGS

This study examined how perceived support from family and friends was associated with self-esteem, sense of mastery, life satisfaction, and internalizing and externalizing problems among Vietnamese sec-

ondary school students. Social support was positively associated with self-esteem, sense of mastery, and life satisfaction and negatively associated with internalizing and externalizing problems. However, self-esteem and sense of mastery showed different patterns in the structural model. Self-esteem was associated with all three mental health outcomes, whereas sense of mastery was associated with internalizing and externalizing problems but not with life satisfaction after accounting for the other constructs in the model. These findings suggest that self-esteem showed a broader pattern across the three outcomes, whereas sense of mastery showed a more outcome-specific pattern.

SOCIAL SUPPORT AND PSYCHOLOGICAL RESOURCES

The positive associations of social support with self-esteem and sense of mastery suggest that supportive family and peer relationships may be relevant to more than students' immediate feelings of connection. Supportive relationships can communicate acceptance and personal value, which may contribute to a more positive evaluation of the self (Bum & Jeon, 2016; Gao et al., 2024; Saeed et al., 2023; Tian et al., 2013). They may also provide reassurance, practical assistance, and opportunities to manage difficulties, thereby potentially supporting students' belief that they can influence important circumstances in their lives (Liu et al., 2025; Zhao et al., 2025). These two processes are related but conceptually distinct. Feeling valued concerns self-worth, whereas feeling able to influence circumstances concerns perceived personal control.

The associations between social support and the three outcomes were only partly accounted for by self-esteem and sense of mastery. The remaining direct associations suggest that family and peer support may also relate to students' adjustment through other pathways, such as belonging, emotional security, coping assistance, and access to practical help (Camara et al., 2017; Cherewick et al., 2025; Liu et al., 2025). Because the study measured perceived support rather than specific supportive behaviors, these additional pathways could not be distinguished in the present model.

DISTINCT PATTERNS OF SELF-ESTEEM AND SENSE OF MASTERY

Self-esteem was positively associated with life satisfaction and negatively associated with internalizing and externalizing problems. This pattern is consistent with research among Vietnamese secondary school students showing that lower self-esteem was associated with greater anxiety, depression, educational stress, and suicidal ideation (Nguyen et al., 2019). Vietnamese adolescent research has also identified self-esteem as an important correlate of life satisfaction and mental well-being (Dam et al., 2023). This broad pattern is consistent with the view that students' evaluation of their personal worth is relevant to both positive well-being and psychological difficulties. Students who perceive themselves as valued and capable may evaluate their lives more positively and may be less vulnerable to negative self-appraisal, social withdrawal, or maladaptive behavioral responses (de Arellano et al., 2023; Kreski et al., 2024; Ngo et al., 2020; Supervía et al., 2023; Szcześniak et al., 2022). The significant indirect associations through self-esteem further suggest that

social support may be related to student adjustment partly because supportive relationships may be associated with students' sense of worth and acceptance (Caqueo-Urizar et al., 2022; Kong & You, 2013; Kong et al., 2013; Zhang et al., 2021).

Sense of mastery showed a more specific pattern. Although mastery was positively correlated with life satisfaction at the bivariate level, its unique association with life satisfaction was not statistically significant when social support and self-esteem were included in the structural model. This difference may indicate that the association between mastery and life satisfaction overlapped with those of social support and self-esteem. Life satisfaction is a broad evaluation of one's life, and feeling valued and socially connected may be more closely related to this evaluation than perceived control alone in the present sample. The finding does not indicate that sense of mastery is unrelated to life satisfaction; rather, it did not provide a distinct association with life satisfaction within this model. One possible contextual explanation is that Vietnamese adolescents' evaluations of life satisfaction may be more closely associated with relational experiences and self-worth than with perceived personal control considered independently. Previous Vietnamese research has linked parent-child relationships and self-esteem with adolescents' life satisfaction and mental well-being (Dam et al., 2023). However, this explanation remains tentative because cultural orientation and specific family processes were not directly measured in the present study.

In contrast, sense of mastery remained negatively associated with internalizing and externalizing problems after the other constructs were considered. Students who believe that they can influence important circumstances may be more likely to approach difficulties through problem solving and adaptive coping rather than helplessness, withdrawal, or impulsive responses (Assari & Caldwell, 2017; Caputo, 2003; Cherewick et al., 2025; Flores et al., 2020). This interpretation is consistent with the construct measured by the Pearlin Mastery Scale and differs from explanations based on mastery goals or mastery orientation in academic achievement settings.

PARALLEL INDIRECT ASSOCIATIONS

The mediation patterns further illustrate the different patterns of association involving the two psychological resources. The indirect associations through self-esteem were consistent with statistical partial mediation of the associations between social support and life satisfaction, internalizing problems, and externalizing problems. Thus, higher perceived support was associated with higher self-esteem, which was in turn associated with a more positive evaluation of

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life and fewer reported difficulties. This pattern suggests that self-esteem may represent a psychological resource linking social relationships with life satisfaction and the two indicators of psychological problems (Gao et al., 2024; Liu et al., 2021; Poudel et al., 2020).

The indirect associations through sense of mastery were consistent with statistical partial mediation of the associations between social support and internalizing and externalizing problems, but not life satisfaction. Supportive family and peer relationships may be associated with students perceiving difficulties as more manageable and with stronger beliefs that their actions can influence outcomes (Eklund et al., 2012; Kleppang et al., 2023; Lindgren et al., 2023). This perceived control was associated with fewer emotional and behavioral problems but did not account for the association between social support and life satisfaction. Taken together, the parallel mediation model suggests that self-worth and perceived control should not be treated as interchangeable resources: self-esteem showed a broader pattern across outcomes, whereas sense of mastery was specifically related to internalizing and externalizing problems. Because all variables were measured at the same time, these indirect associations represent statistical mediation rather than established temporal or causal processes.

IMPLICATIONS

The findings support several practical considerations for schools, counselors, and families. Schools may strengthen peer support through structured peer-mentoring programs, cooperative classroom activities, regular student check-ins, and clear procedures for responding to bullying or social exclusion. Family-school communication can also be used to help parents recognize students' emotional needs and provide consistent encouragement during periods of academic or social difficulty (Butler et al., 2022). These practices should focus on the quality and accessibility of support rather than assuming that the mere presence of family members or peers is sufficient.

The different findings for self-esteem and sense of mastery also suggest different targets for school-based support. Self-esteem may be supported through strengths-based feedback, recognition of realistic progress, opportunities for meaningful participation, and individual or small-group counseling that addresses negative self-evaluation (Hoffman & Schacter, 2024). Sense of mastery may be supported through structured problem-solving activities, coping plans, manageable choices, and reflection on aspects of a difficult situation that students can influence (Cherewick et al., 2025). Consistent with the outcome-specific findings, these strategies are most directly relevant to internalizing and externalizing problems rather than

to life satisfaction. School counselors and teachers may consider these strategies when supporting students with emotional or behavioral difficulties, while students with persistent or severe problems should be referred for appropriate psychological assessment and intervention. These recommendations are practical applications of the observed associations and should not be interpreted as evidence that the present study tested the effectiveness of specific programs (Butler et al., 2022).

LIMITATIONS

This study has several limitations. First, its cross-sectional design did not establish temporal ordering among social support, self-esteem, sense of mastery, and student outcomes. The indirect paths therefore cannot demonstrate temporal or causal mediation. Second, the convenience sample was restricted to students in Grades 8 to 11 attending participating schools in Hanoi. The findings therefore cannot be generalized to all Vietnamese school students, including younger children, adolescents who are not attending school, or students from other regions, school systems, and socioeconomic settings. Third, all variables were reported by students at one time point, which may have increased shared-method variance and response bias. The study also did not include contextual variables such as socioeconomic conditions or family circumstances that may be related to both perceived support and student adjustment.

Measurement limitations should also be considered. Although the instruments were translated and back-translated, this procedure did not constitute a full cross-cultural validation, and measurement invariance across cultural or language groups was not examined. The social support measure included only the Family and Friend Support subscales and therefore did not represent all possible sources of support. In addition, several constructs had AVE values below .50 and included indicators with low loadings. The internalizing and externalizing problem domains showed modest internal consistency and only borderline discriminant validity. These measurement characteristics may have reduced the precision of some estimated associations, particularly those involving the broader SDQ measures of internalizing and externalizing problems.

FUTURE RESEARCH

Future studies should use longitudinal or repeated-measures designs to examine whether changes in social support precede corresponding changes in self-esteem, sense of mastery, and the student mental health outcomes. Samples from different regions,

school types, and socioeconomic backgrounds would provide a stronger basis for evaluating the generalizability of the findings. Multi-informant data from students, parents, and teachers, together with behavioral or school-based indicators, could reduce reliance on a single reporting source. Further research should also evaluate the measurement properties of the Vietnamese-adapted instruments and examine whether self-esteem and sense of mastery continue to show distinct associations with life satisfaction and internalizing and externalizing problems across developmental stages and cultural contexts.

CONCLUSIONS

This cross-sectional study examined how perceived support from family and friends was associated with self-esteem, sense of mastery, life satisfaction, and internalizing and externalizing problems among Vietnamese secondary school students. Greater perceived social support was associated with higher self-esteem, a stronger sense of mastery, greater life satisfaction, and fewer internalizing and externalizing problems. A key finding was the different pattern of the two psychological resources. The indirect associations through self-esteem were consistent with statistical partial mediation for life satisfaction and both problem domains. In contrast, the indirect associations through sense of mastery were consistent with statistical partial mediation for internalizing and externalizing problems but not for life satisfaction. These findings suggest that self-esteem and sense of mastery are related but distinct resources: within the measurement framework used in this study, self-esteem showed a broader pattern of associations across life satisfaction and both problem domains, whereas sense of mastery was specifically associated with internalizing and externalizing problems. Because the data were collected at one time point, the direction and temporal order of these relationships cannot be established. The findings may inform school- and family-based efforts to strengthen supportive relationships, positive self-evaluation, and students' perceived capacity to manage difficulties.

DISCLOSURES

This study was funded by the Vietnam National Foundation for Science and Technology Development (NAFOSTED) under research project No. 501.02-2023.06, contract No. 07/2024/VI/HĐKHXH. This study was approved by the Vietnam Ministry of Science and Technology, and Institute of Psychology, Vietnam Academy of Social Sciences (reference No. 07/2024/VI/HĐKHXH). The authors declare no conflict of interest.

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