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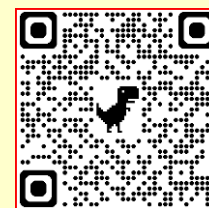
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Determinants of Behavioral Adjustment in Youth: The Moderating Role of Self-Esteem

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ABSTRACT

This study explores how peer influence and parental emotional support affect behavioral adjustment in youth, with self-esteem examined as a moderating factor. Using a quantitative design, survey data from adolescents were analyzed through SPSS, employing reliability testing, exploratory factor analysis, multiple regression, and moderation analysis. The findings show that peer influence ($\beta = 0.484$) has the strongest impact on behavioral adjustment, while parental emotional support ($\beta = 0.32$) also plays a meaningful role by fostering stability and emotional security. Self-esteem emerged as a significant moderator ($\beta = 0.29$), softening the extent to which peer pressure translates into adjustment outcomes. These results add nuance to existing theories of adolescent development by illustrating how external relationships and internal strengths interact to shape behavior. Practically, the study highlights the importance of cultivating self-esteem, reinforcing parental support, and fostering positive peer environments to promote healthier adjustment. Together, these insights offer guidance for educators, parents, and policymakers working to support adolescent well-being.

KEY WORDS: Behavioral Adjustment; Peer Influence; Parental Emotional Support; Self-Esteem; Youth Development

1. INTRODUCTION

Adolescence is often described as a crossroad, where choices, relationships, and habits begin to leave lasting imprints on a young person's life. The way young people adjust their conduct and emotions to meet social and academic expectations, or what scholars call behavioral adjustment, serves as a cornerstone for healthy development. When this process breaks down, challenges rarely

remain contained; instead, they spill into multiple areas of life, giving rise to inward struggles like anxiety and depression as well as outward behaviors such as aggression and defiance (Bornstein et al., 2010). The consequences stretch well beyond immediate well-being as long-term studies show that persistent adjustment problems in childhood are strongly tied to lower economic stability, increased reliance on social assistance, and fragile interpersonal relationships in adulthood, particularly when difficulties co-occur (Vergunst et al.,

2023). Schools further magnify this dynamic, as classroom climate, teacher-student bonds, and peer connectedness can either reinforce resilience or deepen vulnerability (Hinze et al., 2024). Far from being a fleeting developmental challenge, behavioral adjustment in youth represents a pressing social concern whose long-run implications make early, context-sensitive intervention essential.

Prior research firmly establishes peers as powerful drivers of youth behavior, for instance, longitudinal meta-analysis shows peers' earlier conduct predicts later internalizing and externalizing outcomes, though effect size and mechanisms vary by behavior and context (Giletta et al., 2021). Parental emotional support can buffer these peer effects, with several longitudinal studies reporting that warm, involved parenting weakens peer contagion of both antisocial and emotional problems (Cutrín et al., 2022; Havewala et al., 2021). Emerging work also suggests self-esteem can alter susceptibility to peer pressure, reducing the move from peer influence to problematic use or aggression in some samples (Irvine et al., 2023; Xu et al., 2023). Yet important gaps still remain as many studies are cross-sectional or focus narrowly on substance use, rely heavily on single-informant self-reports, and use convenience samples that limit cultural generalizability. To address these limits, this paper tests peer influence and parental emotional support together, uses longitudinal, multi-informant measures of behavioral adjustment, and explicitly models self-esteem as a moderator of peer effects, improving causal inference and external validity.

This investigation centers on two guiding questions: "How do peer influence and parental emotional support shape behavioral adjustment in youth?" and "In what ways does self-esteem moderate the link between peer influence and behavioral adjustment?". The purpose of addressing these questions is not limited to testing isolated associations but rather to deepen understanding of how social dynamics and psychological resources interact in shaping adjustment outcomes. Conceptually, the study seeks to unpack how peer pressure can either undermine or reinforce adaptive behavior, while parental emotional support serves as stabilizing force. Self-esteem is positioned as a critical moderator, offering protection against negative peer effects by shifting the intensity of direction of those influences. Beyond conceptual contributions, the research also intends to overcome gaps in prior work that has often examined these factors separately. Ultimately, the objective is to build an integrated model that enriches theory while offering practical guidance for educators, parents, and policymakers seeking to foster healthier developmental pathways.

2. LITERATURE REVIEW

2.1. Behavioral Adjustment among Youth

Behavioral adjustment among youth can be understood as the ability of adolescents to regulate emotions and behavior in ways that meet social, academic, and developmental expectations. It is often assessed through patterns of internalizing problems, such as anxiety and depression, and externalizing tendencies like aggression or rule-breaking (Bornstein et al., 2010). Through powerful lens of Social Cognitive Theory, it frames adjustment as the outcome of reciprocal interactions between young people's self-regulatory capacities, their actions, and the environmental feedback they receive (Bandura, 2001); the framework especially emphasizes why close contexts such as family, peers, and schools function as their protective buffers or reinforcing agents of maladjustment. Adjustment extends far beyond clinical diagnosis; it reflects a broad developmental competence with ripple effects across domain, for instance, longitudinal studies demonstrate that difficulties in emotional or behavioral regulation can spill into academic underachievement and

later mental health challenges, a process described as "developmental cascades" (Moilanen et al., 2010). At the population level, child and adolescent mental disorder remain strikingly common, with recent global estimates suggesting that approximately one in five young people experience significant behavioral and emotional challenges, indicating the heavy public health burden of maladjustment (Polanczyk et al., 2015). Recent meta-analyses confirm that universal social-emotional learning (SEL) programs reliably enhance students' self-regulation, reduce, problem behaviors, and foster academic success, reaffirming the link between behavioral adjustment and educational outcomes (Cipriano et al., 2023), highlighting how schools have become a focal arena for preventive and developmental efforts. Even more recent work highlights that program effectiveness depends heavily on teacher training and implementation quality, with well-prepared educators magnifying gains in student conduct and socio-emotional competence (Shi & Cheung, 2024). A practical illustration comes from the Good Behavior Game, a classroom-wide arrangement strategy introduced in early grades; randomized trials reveal that this approach not only curbed aggression and disruptive behavior in childhood but also yielded long-term gains in mental health and social functioning into young adulthood (Kellam et al., 2008). Reinforcing this, longitudinal cohort studies show that persistent behavioral difficulties, whether internalizing, externalizing, or both are tied to diminished economic prospects and increased welfare reliance in adulthood, with comorbidity linked to the most severe outcomes (Vergunst et al., 2023). These strands of evidence make clear that behavioral adjustment in youth is not a passing developmental concern but a decisive foundation that shapes educational trajectories, mental health, and life opportunities well into adulthood.

2.2. Anchoring theoretical frameworks

2.2.1. Attachment Theory

Attachment theory, first articulated by John Bowlby and extended through Mary Ainsworth's observational studies, explains that children are biologically inclined to seek closeness to caregivers as way to ensure safety and survival. Through repeated interactions, they build internal working models that shape expectations of self and others, influencing how they respond to stress, interpret social signals, and form relationships (Dykas & Cassidy, 2011). When caregivers are consistent and emotionally responsive, children are more likely to develop secure attachment, while inconsistent or neglectful caregiving tends to produce insecure attachment patterns. These orientations, therefore, form the foundation for later socio-emotional functioning, guiding how adolescents manage emotions, regulate behavior, and interact with their environments. In adolescences, the theory helps explain why some young people navigate social and emotional challenges with resilience while others veer toward maladjustment. Adolescents with secure attachments tend to demonstrate better emotional regulation, constructive coping strategies, and stronger resilience in facing stressors; by contrast, insecure attachment, especially when disorganized, correlates robustly with behavioral issues, including externalizing symptoms like aggression, proven in the meta-analysis spanning nearly 6,000 children found a moderate effect, indicating the significance of attachment in shaping conduct across development (Fearon et al., 2010).

Parental emotional support during adolescence as an extension of the secure base described in the early theory. Research shows that adolescents who perceive their parents as emotionally available and supportive are less likely to develop externalizing problems, and these protective effects remain even when earlier behavioral patterns

are accounted for (Pinquart, 2017). Attachment theory also clarifies why parent-child bonds shape how adolescents engage with peers as strong parental attachments encourage social competence and more supportive peer relationships, which in turn reduce the likelihood of maladaptive behaviors, while insecure attachments leave adolescents more vulnerable to negative peer pressures (Delgado et al., 2022). Another important contribution of attachment theory lies in its link to self-evaluative processes, as adolescents who grow up with secure attachments typically develop a stronger sense of self-worth and higher self-esteem, whereas those raised in inconsistent or unsupportive environments often carry self-doubt and lower self-regard. Meta-analyses confirm consistent associations between attachment security and self-esteem, positioning self-worth as a resilience factor that can alter the influence of peers on behavior (Gorrese & Ruggieri, 2013), suggesting that self-esteem is one mechanism through which supportive caregiving environments promote healthier adjustment. Overall, the theory provides a comprehensive lens for understanding adolescent behavioral adjustment by linking the quality of early caregiving to later regulatory abilities, peer dynamics, and self-evaluative resources. Its core strength lies in showing how emotional support within families establishes secure bases that foster resilience, how insecure bonds heighten vulnerability to maladjustment, and how self-esteem, emerging from these relational patterns, can alter the influence of peers. This integrative perspective underscores the enduring relevance of attachment processes for explaining developmental outcomes across adolescence.

This model presumes that parental emotional support can be taken as a meaningful indicator of attachment security in adolescence and that attachment-related processes such as the regulation of emotions and the interpretation of social cues hold relevance across varied adolescent settings. It also presupposes that the effects of peer influence are filtered through expectations shaped by prior attachment experiences, that self-esteem remains sufficiently consistent in adolescence to act as a moderator of peer dynamics, and that behavioral adjustment validly reflects both internalizing and externalizing patterns of adaptation.

2.2.2. Ecological Systems Theory

Ecological Systems theory, as developed and refined by Bronfenbrenner and colleagues, frames development as the product of nested, interacting systems and ongoing proximal processes that occur between a growing person and their immediate settings (Bronfenbrenner & Morris, 2007). Central to the model is the idea that everyday proximal processes within the immediate contexts such as family and peers are the primary engines of development, while broader systems provide opportunities or constraints that channel those interactions (Tong & An, 2024). The perspective underscores why behavioral adjustment in adolescence cannot be reduced to individual traits alone but must be seen as the cumulative outcome of nested systems that interact over time. During adolescence, the theory helps explain why some young people display adaptive regulation while others struggle with behavioral maladjustment. Microsystem influences such as family support and peer interactions exert powerful effects because they are frequent, emotionally salient, and directly tied to regulation of behavior and emotion. Meta-analytic findings consistently show that peer dynamics predict reliable shifts in conduct, even after accounting for baseline behaviors (Giletta et al., 2021). Similarly, parental behaviors such as warmth, responsiveness, and consistent monitoring are systematically associated with reductions in externalizing difficulties, highlighting the continuing role of caregivers as stabilizing forces during adolescence (Pinquart, 2017).

Parental emotional support, in particular, reflects the microsystem's protective role as Bronfenbrenner's framework highlights that adolescents do not simply receive support but engage in ongoing, bidirectional exchanges with parents, which reinforce or weaken regulatory capacities over time. When parents remain emotionally attuned, they provide scaffolding that helps adolescents navigate stress and build adaptive routines. These micro-level interactions are further shaped by the mesosystems, where the coordination of family and school environments can either magnify or dilute the impact of parental support. For example, when open communication exists between home and teachers, adolescents receive consistent expectations across settings, creating conditions that promote stronger adjustment (El Zaatari & Maalouf, 2022). Peer influence also takes on distinct importance in this ecological view as friendships, group norms, and reputational concerns form part of adolescents' daily environment and provide models that shape regulation and decision-making. Longitudinal evidence shows that peer influence effects, though modest in size, accumulate over time and can reinforce either positive conduct or problem behaviors (Giletta et al., 2021). Within Ecological Systems theory, these peer dynamics are not isolated but embedded within larger cultural and community contexts that dictate which behaviors are valued or discouraged. The macrosystem, in turn, defines the norms that determine how peer influence is interpreted and enacted. Within this framework, self-esteem is conceptualized as a person-level resource that interacts with ecological settings. It is both shaped by proximal processes, such as parental support and peer validation, and capable of moderating their influence on adjustment. Orth et al.'s (2018) meta-analytic findings confirm that self-esteem demonstrates substantial stability across adolescence, making it a credible moderator of environmental effects. From an ecological perspective, self-esteem helps determine how adolescents internalize peer expectations or respond to supportive parenting, thereby altering the trajectory of behavioral adjustment. In short, by emphasizing the central role of microsystem processes while situating parental support, peer influence, and self-esteem within wider systems and developmental trajectories, the theory captures the complexity of youth behavior and underscores that adjustment emerges not from isolated factors but from layered interdependent interactions across contexts and time.

Ecological Systems theory assumes that parental emotional support and peer influence represent core microsystem processes that reliably shape adolescent behavioral adjustment; it further assumes that mesosystem linkages, such as coordination between family and school, indirectly reinforce or weaken these effects, while broader exosystem and macrosystem influences provide contextual backdrops that cannot be ignored. The model presumes that self-esteem is both an outcome of proximal processes and a moderator of peer effects, and that behavioral adjustment reflects cumulative interactions across system and over developmental time.

2.3. Peer influence

Peer influence denotes the degree to which adolescents' attitudes, emotions, or behaviors shift in response to the norms and actions of their friends or broader peer group, a phenomenon captured across longitudinal meta-analytic syntheses (Giletta et al., 2021) and framed by the Influence-Compatibility model, which suggests adolescents are most influenced when peer norms align with their dispositions and the social rewards of belonging are strong, conformity thus reflects strategic adaptation to maintain group acceptance and reinforce identity, making peer norms especially potent in shaping adjustment (Laursen & Veenstra, 2021). Grounded in Social Learning theory, the significance of peer influence can be

explained as how adolescents acquire new behaviors by observing peers, internalizing modeled actions, and receiving reinforcement from group approval or sanctions (Bandura & Walters, 1977). Recent meta-analytic work quantifies a modest but reliable peer effect on substance use ($\beta \approx .147$) (Watts et al., 2024), showing that adolescents tend to align their substance use with peers' perceived or actual behavior. Longitudinal evidence further reveals that these socialization effects extend to internalizing and externalizing problems but are contingent on family processes, suggesting parental emotional support can attenuate the transmission of friends' difficulties to the adolescent (Havewala et al., 2021). Critically, the literature highlights that peer influence differs across behavior type, whether influence is measured through perceived or actual peer reports, the stage of development, and broader contextual factors, making it a conditional and dynamic process rather than a uniform casual force in behavioral adjustment.

Peer groups are among the most influential contexts of adolescence, shaping not only daily choices but also long-term patterns of adjustment as Social Learning theory explains that adolescents adopt behaviors they observe and that are reinforced within their social environments (Bandura & Walters, 1977). Evidence aligns with this view, as classroom-level prosocial norms have been shown to predict increases in individual helping and cooperative behavior over time, with those starting from lower baselines demonstrating the strongest gains (Busching & Krahé, 2020). Longitudinal data from the GREAT project also reveal that affiliating with prosocial peers is linked to declines in delinquency and drug use, suggesting that peers can function as protective forces that reduce negative trajectories even when prior behavior and family factors are accounted for (Walters, 2020). Social Identity theory provides a complementary explanation by arguing that adolescents shape their self-concept through group membership, making them especially responsive to peer norms and status signals; the need to preserve belonging and affirm identity heightens the impact of high-status peers on behavior (Tajfel et al., 2001). Experimental work in a simulated chat-room showed that high-status peers significantly increased adolescents' conformity to prosocial norms, both publicly and privately (Choukas-Bradley et al., 2015). In practice, positive peer effects are not limited to controlled settings, as group-care studies demonstrate that exposure to constructive peer behavior predicts substantial gains in youths' own prosocial conduct (Osei, 2021). When peer relationships are grounded in positive norms and reinforced through status and belonging, they transform from potential liabilities into some of the most powerful forces propelling healthy behavioral adjustment in adolescence.

Although peers are often viewed as central engines of adolescent socialization, a competing body of work shows their impact on behavioral adjustment to be modest, context-dependent, or even negligible. Steglich et al. (2010) advance this view by distinguishing between social influence and selection processes, showing that adolescents frequently choose friends who already resemble them, which complicates claims of direct peer effects. Network and simulation analyses lend support to this interpretation, for example, Wang (2017) demonstrated that selection accounted for much of the link between peers and adolescent drinking, with little evidence that influence increased school-level prevalence once friend choice was considered. Similarly, longitudinal studies of smoking behavior indicate that selection often outweighs socialization, leaving only a minor role for influence in shaping conduct (Loan et al., 2021). Complementing these perspectives, the bioecological framework highlights how mesosystem and institutional contexts can override peer dynamics (Bronfenbrenner & Morris, 2007). Large-scale

surveys show that perceived peer support does not consistently predict school engagement, in part because peers often lack the authority, resources, or continuity to sustain academic motivation, whereas parental and teacher support provides more structured, enduring, and reliable forms of guidance (Gutiérrez et al., 2017). This body of literature stresses that peer similarity in behavior is not always evidence of influence and that the weight of peer effects is deeply conditioned by selection processes and ecological contexts.

With certain studies report mixed findings, the wider body of evidence indicates that peer relationships play a significant role in shaping adolescents' social and emotional adaptation. On this basis, the following hypothesis is advanced:

H1: Peer Influence has a significant effect on Behavioral Adjustment among Youth.

2.4. Parental Emotional Support

Parental emotional support is best understood as the consistent warmth, responsiveness, and empathy that parents provide, giving adolescents a secure sense of being valued and understood (Choe et al., 2013, Cutrín et al., 2022). Family Systems theory frames this support within a larger relational structure, proposing that families function as interconnected systems in which patterns of emotional communication and availability shape individual growth (Minuchin, 1985). Through this lens, parental support is more than one-to-one exchange between parent and child; it reflects systemic processes that set expectations for care, establish models for regulation, and foster a climate where adolescents learn to cope effectively with challenges. Such support plays a crucial role in strengthening self-control, encouraging adaptive coping, and discouraging maladaptive conduct. Empirical work substantiates these claims, with longitudinal research showing that adolescents who perceive higher parental emotional support are less likely to report antisocial behaviors or emotional distress over time (Cutrín et al., 2022). More recent contributions highlight indirect pathways, demonstrating that support enhances self-efficacy, which then reduces psychological symptoms, through the strength of these effects differs depending on socio-economic conditions (Qian et al., 2024). Altogether, parental emotional support emerges as a core familial resource that operates within relational systems to promote healthier behavioral adjustment.

Parental emotional support ultimately acts as a cornerstone of adolescent development, cultivating the resilience and self-regulation that allow young people to manage challenges and achieve stronger behavioral adjustment. Emotional Socialization theory interprets the mechanism by which parents' reactions to children's emotions shape children's emotional competence, teaching regulation through modeling, coaching, and contingent responses (Eisenberg & Fabes, 1994). Guo et al. (2024) show that parental emotion socialization reduces adolescent internalizing problems primarily by strengthening emotion regulation capacities. Complementary evidence from Ratliff et al. (2023) finds that supportive parent-adolescent relationships promote adjustment through the same mediating role of regulation, which links warm, responsive parenting to lower aggression and depressive symptoms over time. Self-Determination theory emphasizes that adolescents thrive when their basic needs for autonomy, competence, and relatedness are supported, which helps explain why emotionally supportive parenting cultivates resilience and adaptive behavioral patterns (Deci & Ryan, 1985). Reinforced by a study by Keskin & Branje (2022) which shows that maternal autonomy support predicts decreases in emotion dysregulation across five years, while Wang et al. (2024) report that parenting styles characterized by emotional

support reduce behavioral problems through enhanced resilience, with benefits observed even across socio-economic differences. Parental emotional support ultimately stands out as a decisive force in adolescence, nurturing regulation, resilience, and self-efficacy that translate into lasting gains in behavioral adjustment.

Although parental emotional support is widely regarded as protective, recent work indicates that its influence on adolescent adjustment can be limited or highly conditional. Daily-diary analyses reveal that short-term links between parenting and adolescent affect vary dramatically across families, with many households showing no consistent parent-to-child effect (Boele et al., 2023). Large-scale longitudinal work similarly finds that trajectories of parental behaviors predict some domains of adolescent well-being but explain little variance for other outcomes or for certain subgroups, including gender differences that alter predictive strength (Zhu & Shek, 2021). The Family Stress model helps make sense of these patterns by showing how economic strain and related stressors can disrupt caregiver functioning, eroding the consistency, quality, or potency of emotional support so that benefits for youth become attenuated under pressure (Conger et al., 1992). At the same time Differential Susceptibility theory highlights why average effects appear small as some adolescents are highly plastic and respond strongly to supportive parenting, whereas others are less reactive and show minimal change, which produces weak population-level associations even when sizable benefits exist for sensitive individuals (Belsky & Pluess, 2009). A recent systematic review of modifiable parent factors in school refusal further documents mixed and context-dependent links between parenting and child outcomes, noting that while some forms of support or involvement reduce avoidance, others show weak or inconsistent associations once child temperament, comorbid anxiety and school-level variables are accounted for (Chockalingam et al., 2023). These lines indicate that parental support does not uniformly translate into better behavioral adjustment; its impact depends on family-specific dynamics, broader stress contexts, and individual differences in susceptibility.

While some evidence points to variability, a substantial share of research underscores that emotionally supportive parenting is central to how adolescents regulate behavior and adapt across context. From this perspective, the study proposes the following hypothesis:

H2: Parental Emotional Support is positively associated with Behavioral Adjustment among Youth.

2.5. The moderating role of Self-Esteem Level

Self-esteem refers to an adolescent's global evaluation of their own worth, encompassing feelings of self-worth, confidence, and emotional steadiness (Martínez-Casanova et al., 2024; Supervía et al., 2023). Conceptually it functions as a self-monitor that signals social value and motivates corrective or affiliative behavior when relational standing is threatened, a perspective captured by sociometer theory (Leary & Baumeister, 2000). Empirical work shows how these ideas play out in developmental contexts; longitudinal analyses indicate that self-esteem not only predicts later well-being but also mediates pathways from family functioning to adolescent depression, with peer relationships shaping the strength and direction of these effects (Huang et al., 2022). Population follow ups further document that early self-esteem exerts lasting influence on mental health trajectories over several years, supporting its relative stability and prognostic value (Carlén et al., 2023). Mechanistically, self-esteem organizes attention to social cues, calibrates threat appraisals, and biases motivational choices, so high self-esteem can buffer youths against maladaptive peer pressures

while low self-esteem may amplify conformity or withdrawal. Self-esteem therefore stands as a central psychological resource in adolescence, shaping how young people interpret social experiences and equipping them with the confidence and regulation needed for healthier behavioral adjustment.

Sociometer theory frames self-esteem as an evolved gauge of social standings that shapes how adolescents interpret acceptance and threat in peer settings (Leary & Baumeister, 2000). From this vantage, higher self-regard reduces the salience of social alarms and lowers the felt need to conform, so peers' signals lose their coercive power. Xu et al.'s (2023) work illustrates this buffering role in concrete ways, showing that self-esteem weakens the link between peer pressure and problematic mobile social media use, with adolescents who report greater self-worth less likely to translate peer-driven cues into compulsive online behavior. Experimental evidence from Tian et al. (2020) complements that findings by demonstrating that peer presence evaluates risk taking chiefly among youth with low self-esteem, whereas those with stronger self-confidence remain comparatively insulated in the same social situation. Trait Activation theory adds a situational logic by proposing that traits express themselves when environments supply relevant cues, so peer contexts that highlight social evaluation or reward selectively activate self-esteem's effects on behavior (Tett & Burnett, 2003). Longitudinal and quasi-experimental designs strengthen this casual interpretation, for instance, Yu et al. (2025) find that higher child self-esteem forecasts greater resistance to peer influence over time, reducing susceptibility to peer-driven behaviors in later adolescence. Huang et al. (2022) report that self-esteem alters pathways from social relationships to internalizing outcomes, showing that its moderating role extends to both externalizing and internalizing domains and operates across family and peer systems. Self-esteem ultimately stands out as a decisive force in shaping whether peer influence becomes a pathway to resilience or a channel for risk, making it central to understanding the contours of adolescent behavioral adjustment.

Despite common expectations that self-esteem will reliably shape how peers affect youth behavior, several rigorous studies finds its role in shpaing the influence of peers on behavioral adjustment is more limited and context dependent than commonly assumed. Situational Strength theory (Meyer et al., 2010) explains this pattern by arguing that when social environments supply powerful, unambiguous cues or incentives, individual traits have little room to steer behavior, so self-esteem's influence is effectively muted. Consistent with logic, Millings et al. (2012) report no stable interaction between self-esteem and peer attachment in predicting school outcomes, as institutional structures and family support overshadowed trait effects. Experimental and correlational work reaches similar conclusions, for instance, Stautz & Cooper (2014) report that self-esteem offered little moderation of peer effects on risk0taking, which they attribute to the domain-specific nature of risky behaviors where situational cues dominate decision-making. Social Identity theory offers an additional account by showing that strong group identity demands can drive conformity across individuals regardless of self-worth, thereby flattening expected differences (Tajfel et al., 2001). Empirical evidence from Delelis's (2023) study ib solitude and anxiety, where self-esteem failed to alter peer-linked outcomes, likely due to group belonging pressures outweighed internal self-views. In sum, self-esteem does not function as an all-purpose shield against peer influence but rather shows effects that rise and fall with context, signaling that its role in young adjustment is more conditional than absolute.

While research acknowledges variation, a consistent body of work shows that adolescents' self-esteem meaningfully shapes how they respond to peer dynamics and regulate behavior across context. Therefore, the study proposes the following hypothesis:

H3: Self-esteem moderates the relationship between peer influence and behavioral adjustment, such that higher levels of self-esteem reduce the impact of peer influence on

adjustment outcomes.

Grounded in well-established theoretical foundations, this study advances prior research by introducing the following conceptual framework:

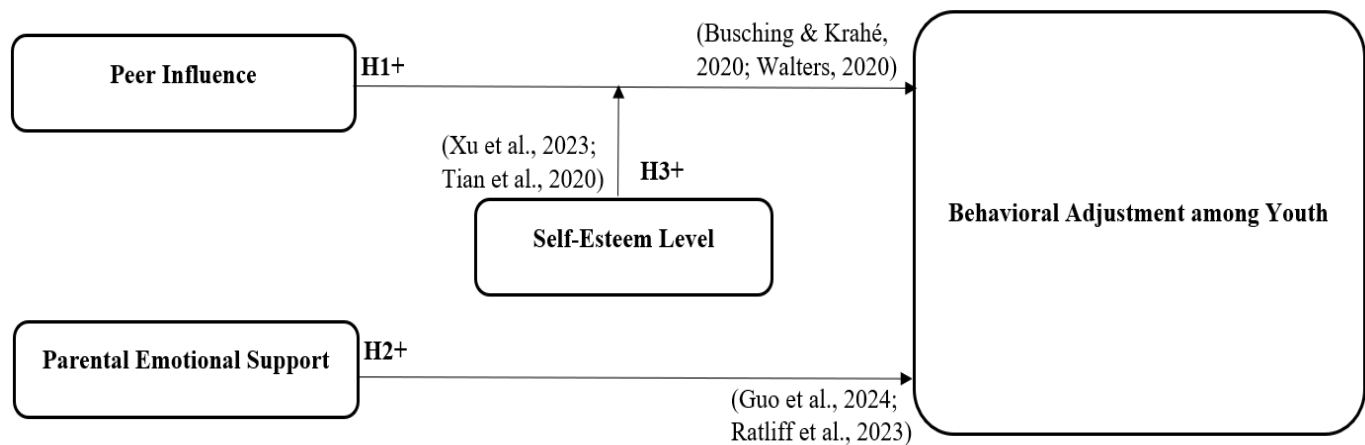


Figure 1: The paper's conceptual framework

3. METHODOLOGY

3.1. Research approach and strategy

The study adopts a quantitative, cross-sectional survey design to investigate how peer influence and parental emotional support relate to behavioral adjustment in adolescents, with particular attention to whether self-esteem moderates the influence of peers. A quantitative framework is especially suited as it allows abstract social and psychological processes to be represented through measurable indicators and tested empirically rather than left to assumption (Babbie, 2010; Creswell & Creswell, 2017). Working from a deductive framework, the study begins with specific hypotheses and evaluates them using statistical tools that capture both direct relationships and the moderating role of self-esteem.

3.2. Sampling technique and procedure

To balance methodological rigor with contextual depth, this study relied on a purposive stratified sampling approach targeting adolescents in Southeast Asia, with Vietnam included alongside Thailand, Malaysia, and the Philippines. The focus was on students aged 13 to 18, a developmental period when parental support, peer dynamics, and self-esteem exert

Particularly strong influences on behavioral adjustment. Stratification was applied across geography, school setting, and socio-economic background to ensure that the data reflected both shared adolescent experiences and local cultural differences. Recruitment was conducted primarily through schools, with parental consent and teacher verification used to confirm eligibility and enhance reliability.

Participants were required to be currently enrolled in secondary school, to maintain active peer relationships in both academic and community contexts, and to report meaningful engagement with at least one parental figure. These conditions ensured that responses reflected genuine exposure to the variables under study. Additional screening considered factors such as grade level, rural or urban

residence, and household composition, allowing the final pool to capture both diversity and comparability across cases.

A total of 710 surveys were distributed, yielding of 385 usable responses after the removal of incomplete or consistent entries. The composition of the final sample was relatively balanced, with about 32% from Vietnam, 26% from Thailand, 24% from the Philippines, and 18% from Malaysia. This spread provided sufficient statistical power for both regression and moderation analyses while maintaining sensitivity to cultural variation. By structuring the sample this way, the study established a participant base that was varied yet representative, enabling a more nuanced investigation into how parental emotional support, peer influence, and the moderating role of self-esteem on peer effects interact to shape behavioral adjustment in adolescence.

3.3. Data analysis description

All analyses were carried out in SPSS, beginning with descriptive statistics to outline participant demographics and general response patterns. The reliability of each construct was examined through Cronbach's alpha to confirm internal consistency. An Exploratory Factor Analysis (EFA) was then used to verify the factor structure, ensuring that survey items properly reflected peer influence, parental emotional support, self-esteem, and behavioral adjustment. To evaluate the hypotheses, multiple linear regression was performed to identify how peer influence and parental emotional support shaped behavioral adjustment. Hierarchical regression using the SPSS Process Macro was subsequently applied to test moderation, capturing whether self-esteem altered the magnitude or direction of peer influence on behavioral outcomes. This approach allowed for a thorough investigation of both direct associations and interaction effects, offering deeper insight into how interpersonal and psychological factors intersect in shaping adolescent adjustment.

4. RESULTS

4.1. Reliability analysis

Table 1: Reliability analysis of "Behavioral Adjustment among Youth".

Reliability Statistics				
Cronbach's Alpha	N of Items			
.733	4			
Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
BAY1	8.001	8.310	.656	.687
BAY2	8.969	8.188	.679	.683
BAY3	7.356	8.309	.628	.695
BAY4	8.821	9.311	.713	.725

“Behavioral Adjustment among Youth”.

Where BAY1 through BAY4 represented the survey items designed to measure behavioral adjustment among youth.

As shown in Table 1, each indicator within the dependent construct demonstrated adjusted item–total correlations of 0.3 or higher. The overall Cronbach’s alpha reached 0.733, exceeding the commonly accepted reliability threshold of 0.7 and outperforming the reliability levels that would have occurred had any item been excluded. In addition, the Cronbach’s alpha associated with each indicator remained above its respective adjusted item–total correlation even when tested under hypothetical item deletion scenarios. Based on these results, all items were retained for subsequent analysis. A similar pattern of internal consistency was evident in the other constructs as well.

4.2. Exploratory factor analysis (EFA)

Table 2: Rotated Component Matrix.

Rotated Component Matrix ^a			
Component with loading factors			
1	2	3	4

BAY 1 .617	PI 1 .660	PES 1 .610	SE 1 .701
BAY 2 .635	PI 2 .647	PES 2 .575	SE 2 .687
BAY 3 .723	PI 3 .693	PES 3 .539	SE 3 .569
BAY 4 .752	PI 4 .570	PES 4 .568	SE 4 .598
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 7 iterations.			

Where PI 1 to PI 4, PES 1 to PES 4, and SE 1 to SE 4 refer to the survey items assigned to the two independent variables and the moderator, respectively.

As presented in Table 2, the rotated component matrix effectively classified the 16 items into four clear factors that align with the dependent variable, the two independent variables, and the moderator. None of the items were dropped during factor extraction, and all demonstrated loadings above 0.5, confirming strong construct validity.

4.3. Multiple linear regression

Table 3: Coefficients^a.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	7.666	.945		4.632	.000
1 PI	.495	.735	.484	4.901	.000
PES	.357	.684	.320	4.637	.000

a. Dependent Variable: BAY

As shown in Table 3, the t-test results yielded significance (Sig.) values of .000, which are far below the standard alpha threshold of 0.05. This confirms that the independent variables—peer influence and parental emotional support—exert a statistically significant effect on the dependent variable, behavioral adjustment among youth. Therefore, both hypotheses are supported.

4.4. Moderator analysis

Table 4: Results analysis of Self-Esteem.

Model : 1
Y : BAY

X : PI
W : SE
Sample Size: 385

OUTCOME VARIABLE:
BAY

Model Summary

R	R-sq	MSE	F	dl1	dl2	p
.688	.473	.511	4.803	3.000	381.000	.000
Model						
	coeff	se	t	p	LLCI	ULCI

constant	6.012	.822	70.038	.000	5.937	5.778
PI	.498	.669	4.080	.000	.617	.538
SE	.514	.500	4.070	.000	.565	.496
Int_1	.290	.560	4.335	.000	.479	.461

Where SE: mean of SE 1 to SE 4.

Table 4 shows that the p-value for the interaction term (Int_1) is 0.000, which is far below the conventional 0.05 threshold. This confirms a significant interaction between self-esteem and peer influence in predicting behavioral adjustment among youth. The interaction coefficient of 0.29 indicates that higher self-esteem strengthens the positive effect of peer influence on behavioral adjustment. Thus, hypothesis H3 is confirmed.

5. DISCUSSION

5.1. Result summary

Regression findings reveal that peer influence carries a substantial effect on behavioral adjustment among youth, reflected by a coefficient of 0.484, indicating that greater exposure to peers strongly shapes adjustment outcomes. Parental emotional support also plays a meaningful role, though at a slightly lower magnitude, with a coefficient of 0.32, highlighting its importance as a stabilizing factor in adolescent development. In addition, the analysis shows that self-esteem moderates the relationship between peer influence and behavioral adjustment, with a moderation strength of 0.29, suggesting that higher self-esteem reduces the extent to which peer pressure translates into adjustment outcomes, reinforcing its protective function in adolescent behavioral pathways.

5.2. Theoretical implication

The observed fair association between peer influence and behavioral adjustment ($\beta = 0.484$) affirms that peer processes are a force in adolescent adaptation, echoing Social Learning and Social Identity theories (Bandura, 2001; Tajfel et al., 2001) and the meta-analyses documenting reliable peer effects (Giletta et al., 2021). The finding strongly concurs with work showing classroom norms and high-status peers shape prosocial or maladaptive conduct (Busching & Krahé, 2020; Choukas-Bradley et al., 2015). Yet it only partially supports selection-focused critiques like network studies emphasizing friend choice over contagion (Steglich et al., 2010; Wang, 2017; Loan et al., 2021) point to mechanisms our cross-sectional design cannot fully disentangle, tempering casual claims. As peer influence remains significant alongside parental emotional support, the evidence aligns with research highlighting family-peer interactions that condition socialization effects (Havewala et al., 2021). Overall, the result disputes dismissive claims that peers are negligible while underscoring that peer impact is robust but context-dependent, and it therefore motivates longitudinal, network-informed designs to separate selection from influence and to map the moderators that shape when peer effects prevail. It also clearly aligns with Bronfenbrenner's microsystem emphasis on peers (Bronfenbrenner & Morris, 2007).

The significant positive association between parental emotional support and behavioral adjustment ($\beta = 0.32$) confirms that warm, responsive caregiving fosters adolescents' emotion regulation and resilience, a conclusion that strongly concurs with longitudinal evidence and Self-Determination theory (Cutrín et al., 2022; Ratliff et al., 2023; Deci & Ryan, 1985). The moderate coefficient suggests parenting often operates indirectly by enhancing emotion regulation, self-efficacy, and resilience rather than as a sole determinant of

outcomes (Guo et al., 2024; Qian et al., 2024; Wang et al., 2024). At the same time, the finding only partially supports claims of uniform parenting benefits such as diary and large-scale cohort studies document family-specific variability and subgroup differences, especially under economic strain (Boele et al., 2023; Zhu & Shek, 2021; Conger et al., 1992). Framed by Differential Susceptibility (Belsky & Pluess, 2009), these tensions indicate the study endorses parental emotional support as a necessary protective resource but disputes any notion that it alone neutralizes peer or structural risks; instead, effects are conditional, mediated, and best addressed through combined family-level and structural interventions.

The moderation analysis found that self-esteem moderated the peer influence and behavioral adjustment link ($\beta = 0.29$), indicating higher self-esteem attenuates the degree to which peer signals translate into adjustment outcomes. This supports sociometer theory's claims that self-worth calibrates sensitivity to social cues (Leary & Baumeister, 2000) and aligns with studies showing buffering effects of self-esteem on peer-driven maladaptive behaviors (Xu et al., 2023; Tian et al., 2020; Yu et al., 2025). It also accords with evidence for self-esteem's relative stability across development (Orth et al., 2018). The finding partially concurs with Trait Activation perspectives (Tett & Burnett, 2003) by showing trait expression depends on context, highlighting that self-esteem's protective effect is contingent rather than universal. Importantly, however, the results challenge claims that trait moderation is negligible under strong situational pressures (Meyer et al., 2010) and studies reporting null interactions (Millings et al., 2012; Stautz & Cooper, 2014; Delelis, 2023), while those caveats explain boundary conditions, the evidence suggests self-esteem still influences outcomes except when peer contexts are overwhelmingly coercive.

5.3. Practical implication

The sizable coefficient for peer influence ($\beta = 0.484$) indicates that peer dynamics are a leverage point for improving youth behavioral adjustment. Schools and practitioners should implement structured peer-led strategies, such as classroom norm interventions, peer mentoring, and selection of high-status prosocial leaders, to amplify positive modeling and group norms shown to raise prosocial behavior and lower delinquency (Busching & Krahé, 2020; Walters, 2020; Choukas-Bradley et al., 2015). Universal classroom approaches that shape group contingencies, exemplified by the Good Behavior Game, can reliably translate peer influence into lasting conduct gains at scale (Kellam et al., 2008). Programs must also map friendship networks and use targeted pairing to counteract exclusionary selection and promote cross-group prosocial ties, consistent with network analyses that separate influence from selection (Steglich et al., 2010). Regular monitoring of network diffusion and behavioral outcomes will ensure peer-driven initiatives realize the sizable effect identified here (Giletta et al., 2021).

The analysis shows that parental emotional support exerts a meaningful effect on youth behavioral adjustment ($\beta = 0.32$), pointing to the practical necessity of strengthening family-based interventions that cultivate warmth, responsiveness, and autonomy support. Programs rooted in Emotion Socialization theory can be designed to train parents in modeling regulation and coaching adolescents' responses, echoing findings that such strategies reduce internalizing problems and aggression by enhancing emotional competence (Eisenberg & Fabes, 1994; Ratliff et al., 2023). Schools and community agencies could integrate workshops modeled on interventions like those examined by Keskin & Branje (2022), which showed that consistent maternal autonomy support diminished emotion dysregulation over several years, demonstrating the long-

term payoff of sustained parental involvement. Similarly, policy initiatives can draw from resilience-focused models (Wang et al., 2024), equipping parents across socio-economic backgrounds with resources to provide consistent emotional scaffolding. By institutionalizing these supports, adolescents are more likely to develop the resilience and regulatory skills necessary for healthier adjustment pathways.

The moderating role of self-esteem in shaping the impact of peer influence on behavioral adjustment carries direct practical relevance for interventions targeting adolescents. With the moderation ($\beta = 0.29$), the findings show that strengthening self-esteem lessens the extent to which peer signals dictate adjustment outcomes. This suggests that school- and community-based programs should explicitly incorporate self-esteem development into their curricula, building on evidence that adolescents with higher self-worth demonstrate reduced conformity to risky peer behaviors (Xu et al., 2023; Tian et al., 2020). Structured interventions such as social-emotional learning initiatives that emphasize confidence-building and resilience could be implemented alongside peer-focused strategies to produce more enduring behavioral outcomes (Cipriano et al., 2023). Moreover, because self-esteem demonstrates relative stability across adolescence (Orth et al., 2018), investing in early initiatives that cultivate positive self-evaluations through mentoring, recognition systems, or parental workshops can offer a long-term buffer against negative peer pressures. In practice, this underscores the importance of embedding self-esteem reinforcement into both educational and family-centered frameworks to sustain healthier adjustment pathways.

5.4. Limitations

Several limitations should be acknowledged in interpreting the findings of this study. First, the use of a cross-sectional survey design restricts the capacity to establish causal relationships between peer influence, parental emotional support, self-esteem, and behavioral adjustment. Although regression techniques can estimate associations, they cannot disentangle temporal ordering or dynamic processes that likely unfold across adolescence. Second, data collection relied heavily on self-report measures, which may be vulnerable to recall bias, social desirability effects, and subjective interpretations of items. While reliability tests and factor analyses helped confirm internal consistency, self-reported responses inevitably capture perceptions rather than objective behaviors. Third, the sampling strategy, though stratified to enhance cultural diversity, was confined to students within specific Southeast Asian contexts. As a result, the findings may not generalize to adolescents outside these cultural or educational systems, where family dynamics and peer networks may operate differently. Finally, the moderation analysis, though statistically significant, is contingent on measurement precision and the adequacy of the constructs used, meaning subtle variations in operationalization could influence the strength or visibility of effects.

5.5. Direction for future research

Future research should build on the present findings by extending both methodological and conceptual boundaries. While the study's cross-sectional design captured meaningful associations, longitudinal approaches would allow closer inspection of developmental trajectories, clarifying whether peer influence and parental emotional support exert short-term effects or accumulate into lasting patterns of behavioral adjustment. Such designs could also address causality more directly by disentangling reciprocal processes, such as whether maladjusted youth gravitate toward certain peers or whether peers drive those behaviors.

Equally important is expanding cultural and contextual scope. The sample spanned Southeast Asian adolescents, yet broader comparative studies could examine whether the interplay of peer influence, parental emotional support, and self-esteem generalizes to settings where family structures, peer norms, or educational systems differ markedly. Cross-cultural evidence would illuminate whether the moderating role of self-esteem represents a universal protective resource or one shaped by cultural definitions of self-worth and belonging.

Finally, future work should deepen the lens on self-esteem as a moderator by exploring its interaction with additional psychological resources such as self-efficacy, emotion regulation, or identity development. Experimental or intervention-based research, for example, could test whether deliberate programs to enhance self-esteem alter susceptibility to peer pressures in controlled contexts. In doing so, scholars can move beyond documenting moderation toward designing mechanisms that actively strengthen resilience. Together, these directions would not only refine theoretical models but also inform practical frameworks for supporting youth across diverse developmental environments.

6. CONCLUSION

The present study demonstrates that adolescents' behavioral adjustment emerges from a complex interplay of social and personal factors. Peer influence exerts a marked impact, often shaping both constructive and problematic behaviors, whereas parental emotional support provides a counterbalance by fostering stability, guidance, and emotional security. Equally significant is the role of self-esteem, which functions as a protective filter, moderating the extent to which external pressures translate into adjustment outcomes. These findings suggest that youth development cannot be reduced to either context or individual traits alone, but rather must be understood as the outcome of their ongoing interaction. In practical terms, this implies that promoting healthier adjustment involves cultivating supportive peer contexts, reinforcing positive parental involvement, and nurturing adolescents' sense of self-worth. Taken together, the evidence highlights the importance of designing interventions that operate across multiple layers of influence, offering a more holistic pathway for guiding young people toward resilient and adaptive futures.

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Appendix: Survey

Table 6. Survey Questionnaire

Background information

1	What is your age?	12–13	14–15	16–17	18 years or older
2	What is your gender?	Male	Female		Prefer not to say
3	What grade/year are you currently in at school?	Grade 7–8	Grade 9–10	Grade 11–12	Other:
4	Who do you currently live with?	Both parents	Single parent	Relatives/Guardian	Boarding/Other:
5	What type of school do you attend?	Public	Private		Other:
6	Do you participate in extracurricular activities?	Yes, regularly	Yes, occasionally		No
7	How many close friends do you interact with regularly?	1-2	3-5		6 or more
8	What is the highest level of education completed by either of your parents?	No formal schooling	Primary school	Secondary school	College/University Postgraduate

No.	Variables	Coded Sub-variables	Content
1.	Behavioral Adjustment among Youth (BAY)	BAY1	Recent meta-analyses confirm that universal social-emotional learning (SEL) programs reliably enhance students' self-regulation, reduce problem behaviors, and foster academic success, reaffirming the link between behavioral adjustment and educational outcomes (Cipriano et al., 2023).
		BAY2	Even more recent work highlights that program effectiveness depends heavily on teacher training and implementation quality, with well-prepared educators magnifying gains in student conduct and socio-emotional competence (Shi & Cheung, 2024).
		BAY3	A practical illustration comes from the Good Behavior Game, a classroom-wide arrangement strategy introduced in early grades; randomized trials reveal that this approach not only curbed aggression and disruptive behavior in childhood but also yielded long-term gains in mental health and social functioning into

			young adulthood (Kellam et al., 2008).
		BAY4	Reinforcing this, longitudinal cohort studies show that persistent behavioral difficulties, whether internalizing, externalizing, or both are tied to diminished economic prospects and increased welfare reliance in adulthood, with comorbidity linked to the most severe outcomes (Vergunst et al., 2023).
2.	Peer Influence (PI)	PI1	Peer influence denotes the degree to which adolescents' attitudes, emotions, or behaviors shift in response to the norms and actions of their friends or broader peer group, a phenomenon captured across longitudinal meta-analytic syntheses (Giletta et al., 2021)
		PI2	Evidence aligns with this view, as classroom-level prosocial norms have been shown to predict increases in individual helping and cooperative behavior over time, with those starting from lower baselines demonstrating the strongest gains (Busching & Krahé, 2020).
		PI3	Experimental work in a simulated chat-room showed that high-status peers significantly increased adolescents' conformity to prosocial norms, both publicly and privately (Choukas-Bradley et al., 2015).
		PI4	Wang (2017) demonstrated that selection accounted for much of the link between peers and adolescent drinking, with little evidence that influence increased school-level prevalence once friend choice was considered.
3.	Parental Emotional Support (PES)	PES1	Empirical work substantiates these claims, with longitudinal research showing that adolescents who perceive higher parental emotional support are less likely to report antisocial behaviors or emotional distress over time (Cutrín et al., 2022).
		PES2	Guo et al. (2024) show that parental emotion socialization reduces adolescent internalizing problems primarily by strengthening emotion regulation capacities.
		PES3	Reinforced by a study by Keskin & Branje (2022) which shows that maternal autonomy support predicts decreases in emotion dysregulation across five years...
		PES4	...while Wang et al. (2024) report that parenting styles characterized by emotional support reduce behavioral problems through enhanced resilience, with benefits observed even across socio-economic differences.
4.	Self-Esteem (SE)	SE1	Xu et al.'s (2023) work illustrates this buffering role in concrete ways, showing that self-esteem weakens the link between peer pressure and problematic mobile social media use, with adolescents who report greater self-worth less likely to translate peer-driven cues into compulsive online behavior.
		SE2	Experimental evidence from Tian et al. (2020) complements that finding by demonstrating that peer presence elevates risk-taking chiefly among youth with low self-esteem, whereas those with stronger self-confidence remain comparatively insulated in the same social situation.
		SE3	Yu et al. (2025) find that higher child self-esteem forecasts greater resistance to peer influence over time, reducing susceptibility to peer-driven behaviors in later adolescence.
		SE4	Huang et al. (2022) report that self-esteem alters pathways from social relationships to internalizing outcomes, showing that its moderating role extends to both externalizing and internalizing domains and operates across family and peer systems