



OPEN Effects of parental burnout and psychological intrusion on adolescent resilience

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Parental burnout is a parenting-specific syndrome characterized by emotional exhaustion, loss of fulfillment, and emotional distancing. Although its impact on externalizing outcomes such as neglect and hostility has been documented, less is known about its implications for adolescents' internalizing difficulties. Drawing on dyadic reports from 2,236 Chinese parent–adolescent pairs, the present study tested whether parental burnout is associated with adolescents' internalizing problems through psychologically controlling parenting, and whether adolescents' psychological capital (PsyCap)—a higher-order construct encompassing hope, optimism, resilience, and efficacy—buffers these associations. Structural equation modeling indicated that parental burnout was positively related to adolescents' internalizing symptoms and that this link was partially mediated by psychological control. Moreover, PsyCap significantly moderated the mediated pathway: the indirect effect of parental burnout via psychological control was weaker among adolescents with higher PsyCap. These findings highlight a dual-process perspective in which family-level stress increases risk while adolescent-level resources mitigate vulnerability. The study underscores the importance of promoting emotionally sustainable parenting and strengthening adolescents' psychological resources through school-based interventions in high-stress family contexts.

Keywords Parental burnout, Internalizing problems, Psychological control, Psychological capital, Parent–adolescent dyads

It often begins subtly: a missed bedtime story here, a sigh of frustration during homework there. Many parents can recall moments when the joy of parenting is overshadowed by relentless obligations—school drop-offs, meals to cook, emotional crises to manage—all unfolding without pause. In today's fast-paced, resource-strained world, parenting has become an unrelenting task that frequently leaves caregivers feeling physically drained and emotionally spent. Despite these parenting challenges, parents remain central to children's emotional development. Caregivers play a key role in supporting the development of children's emotion regulation through processes of coregulation, whereby they provide external scaffolding during emotional experiences¹. In this regard, parents function not merely as passive protectors but also as active co-regulators of their children's emotions. Meta-analytic evidence further supports this perspective, indicating that parents' difficulties in emotion regulation—such as low emotional awareness, suppression, or lack of strategies—are consistently associated with children's regulatory difficulties and internalizing symptoms². However, sustaining this demanding role often depends on external support systems, which are frequently lacking.

From the earliest stages of a child's life, parents are exposed to a continuous stream of demands, ranging from daily hassles (e.g., managing routines, negotiating screen time) to chronic stressors³ (e.g., developmental disorders, behavioral challenges). When such demands are not met with adequate personal, familial, or institutional support, parents become vulnerable to parental burnout—a psychological syndrome specific to parenting, characterized by persistent emotional depletion and loss of fulfillment in the parental role⁴. In light of these challenges, the present study specifically examines adolescents' mental health, exploring whether parental burnout is associated with internalizing problems in adolescents, which include a range of emotional and psychological difficulties commonly observed during this developmental period.

Parental burnout is commonly understood to involve four interrelated dimensions, each of which manifests in tangible ways in family life. The first is emotional exhaustion—parents may find themselves mentally depleted by even the smallest of tasks, such as preparing breakfast or helping with homework, and often report persistent fatigue, insomnia, or even crying episodes in isolation. The second dimension is a loss of parental identity. Once

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confident and engaged, parents may begin to see themselves as failures, comparing their current selves with a past version who once felt competent, patient, and emotionally available. The third dimension reflects a sense of disillusionment with the parenting role—what once felt meaningful now feels obligatory or even burdensome. For example, a parent may no longer look forward to family outings or birthdays, instead feeling dread or detachment. Finally, emotional distancing occurs when burned-out parents, overwhelmed and resentful, begin to withdraw emotionally, speaking less to their children, avoiding eye contact, or no longer initiating physical affection, such as hugs or bedtime stories.

While prior research has made commendable progress in identifying risk factors that contribute to parental burnout—such as neuroticism, child temperament, and family functioning⁵—much less is known about what happens next: What does parental burnout mean for the developing adolescent on the receiving end? This is not a trivial question. Adolescence, particularly its early stages, is a developmentally sensitive period marked by increased emotional lability and vulnerability to stress⁶. When the adults they rely on for safety and emotional regulation are themselves depleted, adolescents may experience profound psychological impacts that are still poorly understood in the literature. Studying these dynamics not only deepens our theoretical understanding of family systems under stress, but also offers urgently needed insights for designing early interventions that promote youth resilience. It is within this framework of theoretical curiosity and applied urgency that the present study is situated.

Parental burnout and internalizing problems in adolescents

Parental burnout does not occur in isolation—it is embedded within the parent-child relational system, where emotional availability, parental involvement, and regulatory support are central to adolescent development^{7,8}. When parents experience emotional exhaustion and alienation, their ability to serve as reliable emotional regulators is significantly diminished. Emotional exhaustion and anxiety act as key mediators linking parental burnout to internalizing symptoms and parenting behaviors⁹. Parents who are physically and emotionally drained often exhibit emotional detachment, engage less in shared activities with their adolescent children, and report weakened connections in parent-child relationships, accompanied by increased hostility⁹.

Although research on parental burnout has largely focused on its antecedents—such as neuroticism, family dysfunction, and caring for high-needs children⁵—less is known about how such burnout may influence children's emotional development. The few studies that do explore this impact often rely on parent-reported outcomes and emphasize externalizing behaviors such as neglect and violence. For instance, Mikolajczak, in a large-scale study of 1551 parents, found that burnout was strongly associated with self-reported abusive and neglectful behaviors⁴. Longitudinal, cross-lagged studies have confirmed this effect across cultural contexts, showing that parental burnout predicts increased risk of child maltreatment over time³.

Yet internalizing consequences—those that manifest within the adolescent's emotional world—may be equally, if not more, concerning. Parental burnout may subtly reshape the family emotional climate, reducing warmth, responsiveness, and empathic attunement. These relational ruptures, in turn, disrupt adolescents' sense of security and emotional stability, potentially leading to sustained psychological distress. Cross-sectional findings support this view: parental burnout has been significantly associated with adolescent loneliness¹⁰ and anxiety¹¹. More decisively, longitudinal evidence suggests a causal trajectory: in a study of 442 Chinese parent-adolescent dyads, Yang et al. found that parental burnout predicted adolescents' depressive and anxious symptoms two months later¹². Similarly, Chen et al. found that maternal burnout influenced adolescents' perception of parental hostility, which mediated the development of later internalizing problems¹³.

Taken together, these findings suggest that parental burnout may serve as an upstream emotional stressor, setting in motion a sequence of relational disruptions and regulatory failures that culminate in adolescent internalizing symptoms. Understanding this process is critical not only for family psychology theory but also for designing timely interventions that buffer youth against parental emotional disengagement.

Psychological control as a potential mechanism

One plausible pathway through which parental burnout may affect adolescents' internalizing problems is via changes in parenting practices—particularly the increased use of psychologically controlling behaviors. In this process, emotional exhaustion leads parents to rely more heavily on intrusive and manipulative tactics, which in turn undermine the adolescent's psychological needs and foster emotional distress.

Psychological control refers to parental behaviors that intrude into the emotional and cognitive world of the child, manipulating thoughts, feelings, and decision-making to align with parental standards¹⁴. Unlike behavioral control—which sets clear external expectations—psychological control is coercive, guilt-inducing, and emotionally invasive¹⁴. For example, a burned-out parent might respond to a child's disagreement not with discussion, but with statements such as, “After everything I’ve done for you, how can you be so selfish?” or, “You’ve really disappointed me.” Over time, these tactics erode the child's sense of autonomy and internal worth.

Emotionally depleted parents often lack the patience and regulatory capacity to engage in warm, supportive parenting. Studies have found that burnout is associated with a greater tendency to withdraw, criticize, or manipulate children emotionally^{15–17}. These parents may resort to emotional blackmail, invalidation of the child's perspective, or excessive guilt induction—all of which restrict the child's ability to think and feel independently.

From the perspective of Self-Determination Theory (SDT)¹⁸, such psychologically controlling practices frustrate three core psychological needs: autonomy (feeling in control of one's actions), competence (feeling effective), and relatedness (feeling emotionally connected to others). Autonomy is undermined by conditional regard, surveillance, and guilt induction, which foster contingent self-worth, self-criticism, and shame, thereby undermining volitional functioning^{19,20}. Competence is eroded when intrusive guidance and excessive correction reduce opportunities for mastery, lowering self-efficacy and eliciting helplessness and depressive affect^{21,22}. Relatedness is jeopardized by invalidation and love withdrawal, which convey emotional insecurity and predict

social anxiety and withdrawal^{23,24}. Accordingly, when these needs remain unmet, adolescents are at heightened risk for emotional strain, identity confusion, and increased vulnerability to anxiety and depression^{25,26}.

A growing body of empirical research supports this mechanism: psychologically controlling parenting has been shown to predict a range of internalizing outcomes—including anxiety, depression, and social withdrawal—across different cultures and age groups²⁷. Second, an attachment-security pathway is plausible. Parental emotional distancing—an established dimension of parental burnout—may weaken youths' felt security. In turn, attachment insecurity is meta-analytically associated with higher levels of internalizing symptoms (e.g., anxiety, depression) from childhood through adolescence^{28–30}. Third, a negative family climate, reflected in heightened expressed emotion (EE; criticism, hostility), may increase adolescents' threat appraisals and promote perseverative cognition (e.g., rumination), thereby raising the risk of internalizing difficulties. This account aligns with family-level models of adolescent depression that emphasize stress/support, social-interactional, cognitive, and affect-regulation processes³¹. Consistent with Family Systems Theory, parental burnout may cascade across family subsystems (e.g., parent–child interactions, overall family climate, daily routines), helping to explain associations between burnout and youth internalizing in addition to the contribution of psychological control^{32,33}. Taken together, these studies indicate multiple, partially overlapping pathways linking parental burnout to adolescents' internalizing problems. Accordingly, the present study focuses on the pathway involving psychologically controlling parenting and tests whether parental burnout is associated with adolescents' internalizing problems both directly and indirectly via increases in parental psychological control.

Adolescents' psychological capital as a moderator

Not all adolescents exposed to parental burnout or psychologically controlling parenting develop internalizing problems. A key reason lies in the variability of adolescents' internal psychological resources, which enable some to adapt more successfully than others. Among these, psychological capital (PsyCap)—a higher-order construct composed of hope, efficacy, resilience, and optimism—has been recognized as a dynamic, state-like capacity that equips adolescents to manage adversity³⁴.

From the adolescent's perspective, parental burnout and psychological control introduce developmental threats that undermine their sense of predictability, emotional safety, and personal agency^{25,30}. These experiences can destabilize their self-worth and elicit chronic stress responses. PsyCap functions as a personal reservoir that adolescents draw upon to buffer these negative effects³⁵. Importantly, PsyCap is developable and responsive to proximal contexts. In the family domain, perceived support, warmth, and consistent routines prospectively predict higher PsyCap and better well-being among school-aged youth, suggesting that supportive family climates help cultivate hope, efficacy, resilience, and optimism^{35,36}. Measurement studies with secondary-school samples also support a second-order PsyCap factor and acceptable measurement invariance, indicating that the HERO resources cohere as a malleable higher-order construct in adolescence³⁷. According to Conservation of Resources (COR) theory, psychosocial resources tend to accrue in “resource caravans” and depend on ecological “passageways,” implying that chaotic, hostile, or unsupportive family climates may impede the development of PsyCap³⁸. Collectively, these findings point to family climate as a plausible antecedent of youth PsyCap and a modifiable target for prevention and early intervention. For example, hope helps them envision alternative futures, self-efficacy motivates active coping, resilience sustains effort during hardship, and optimism maintains positive expectations despite setbacks^{39–42}. These components collectively foster a sense of control and meaning even in emotionally strained family environments.

Empirical studies consistently show that adolescents with high PsyCap are better equipped to regulate their emotions, maintain academic engagement, and preserve mental well-being, even under considerable family stress^{43,44}. PsyCap can act as a protective-stabilizing or protective-enhancing factor⁴⁵, buffering the harmful consequences of environmental risks such as parental conflict, neglect, or emotional disengagement.

When adolescents face parenting marked by burnout and control, those with high PsyCap may reinterpret, reframe, or disengage from the emotional impact of parental dysfunction, thereby preserving their emotional boundaries. Conversely, adolescents with low PsyCap may absorb distress more deeply, increasing the risk of anxiety, depression, and identity confusion. From a relational developmental systems perspective⁴⁶, youth development reflects ongoing, bidirectional transactions between environmental adversity and internal strengths. Accordingly, PsyCap may mitigate both the direct effects of parental burnout and the indirect effects operating through psychologically controlling parenting. Moreover, parental burnout may erode the family “passageways” that cultivate PsyCap, thereby lowering adolescents' resources and amplifying the extent to which burnout and psychological control are associated with internalizing problems.

In this way, PsyCap does not eliminate risk but shapes how risk is experienced, empowering adolescents to transform potentially damaging family dynamics into challenges that can be met with active, resilient coping.

Current study

Family relationships constitute proximal contexts for adolescents' psychological adjustment. In view of rising public concern about youth mental health and intensifying parenting demands in rapidly changing contexts such as contemporary China, the present study examines how parental burnout relates to adolescents' internalizing problems through family processes and adolescent strengths. We specify a moderated mediation model in which psychologically controlling parenting mediates the association between parental burnout and adolescents' internalizing problems, and adolescents' PsyCap serves as a protective moderator of the indirect path. Using dyadic data from Chinese parent–adolescent pairs with reports from both parents and adolescents, we aim to clarify family-based transmission of stress and identify modifiable protective resources. The conceptual model guiding the analyses is shown in Fig. 1, and the theoretical protective patterns are outlined in Fig. 2. Specifically, we evaluate the following hypotheses:

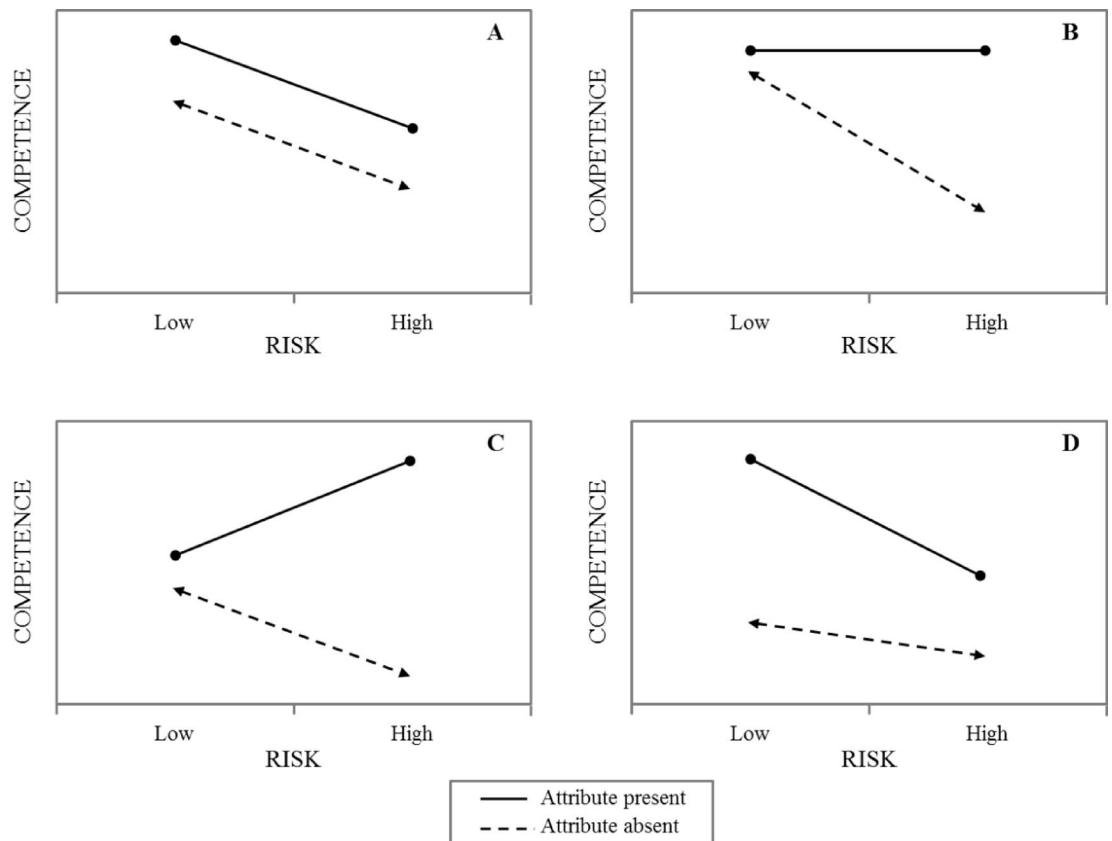


Fig. 1. Four moderating patterns based on the role of protective factors at different risk levels: (A) protective, (B) protective-stabilizing, (C) protective-enhancing, (D) protective-reactive.

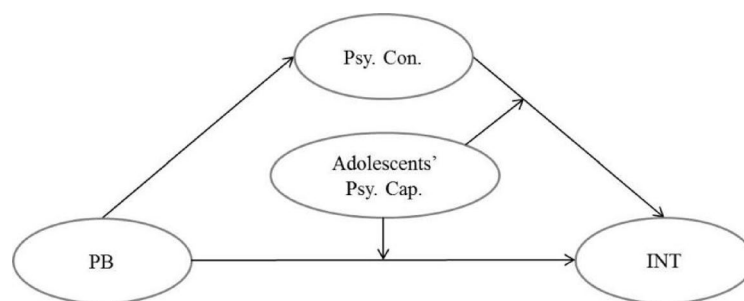


Fig. 2. The conceptual moderated mediation model for psychological control and adolescents' psychological capital in the link between parental burnout and adolescents' internalizing problems. *Note:* Latent variables are shown in the figure. PB = Parental Burnout, Psy. Con. = psychological control, INT = Internalizing problems, Psy. Cap. = psychological capital.

H1 Higher levels of parental burnout will be positively associated with greater adolescent internalizing problems.

H2 Psychologically controlling parenting will mediate the association between parental burnout and adolescent internalizing problems.

H3 Adolescents' PsyCap will moderate the indirect path from parental burnout to internalizing problems via psychologically controlling parenting, such that the indirect effect is weaker at higher levels of PsyCap.

Method
Participants

A total of 2,236 parent–adolescent dyads from mainland China participated in this study. Most responding parents were mothers ($n=2,046$, 91.5%), with fewer fathers participating ($n=190$, 8.5%). Analyses pooled mother and father reports, and parent gender was statistically controlled in all models. The mean age of responding parents was $M=39.96$ years ($SD=4.55$). Adolescents were evenly distributed by sex (48.7% female), with a mean age of 12.69 years ($SD=0.36$). All participating adolescents were enrolled in the seventh grade across multiple junior high schools in urban and suburban districts. Families were eligible to participate if (a) the adolescent lived with at least one parent, (b) both parent and adolescent were willing to participate, and (c) no developmental disabilities or severe physical/mental illness were reported in either party. Cases with missing data exceeding 20% on any scale were excluded from the final analysis. Detailed demographic information is presented in Table 1.

Procedure

Ethical approval (IRB No. HR2021-08-001) was granted by the Ethics Committee of the School of Journalism and Communication, Ningxia University. A stratified sampling approach was employed to recruit families through collaboration with junior high schools. Informed consent was obtained from both parents and adolescents, with parental consent serving as legal authorization for adolescent participation. To ensure anonymity and reduce social desirability bias, all participants were assured that their responses would be kept confidential and used solely for academic research. All methods were carried out in accordance with the relevant guidelines and regulations, including the ethical standards of the institutional and/or national research committee, and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

A total of 2,500 questionnaires were distributed to adolescent–parent pairs. Adolescents completed their self-report questionnaires in classroom settings during school hours under the supervision of trained graduate students in psychology. Parents completed their portion of the survey independently at home and returned the completed forms through their children to designated homeroom teachers the following day. The final response rate was 89.4%. The survey booklet included matched but anonymous codes for parent and adolescent forms to ensure dyadic data linkage.

Measures

Parental Burnout. Parental burnout was assessed using the Chinese version of the Parental Burnout Assessment (PBA) developed by Roskam et al.²⁸, and validated in Chinese samples¹⁰. The 23-item scale measures four core dimensions: emotional exhaustion (e.g., “I feel completely rundown by my role as a parent”), contrast with previous parental self (e.g., “I’m ashamed of the parent that I’ve become”), saturation (e.g., “I cannot take being a parent anymore”), and emotional distancing (e.g., “I’m no longer able to show my child how much I love them”). Items were rated on a 7-point Likert scale (0 = “never” to 6 = “daily”). For descriptive statistics, we computed a composite mean across all 23 items (higher scores indicate greater parental burnout; $\alpha=0.94$); for structural equation modeling (SEM), parental burnout was specified as a latent factor consistent with the four-dimension structure.

Psychological Control. Adolescents reported their perceived psychological control using an 18-item scale developed by Wang et al.⁴⁷, previously validated in Chinese cultural contexts⁴⁸. The scale comprises three dimensions: guilt induction (10 items; e.g., “My parents tell me I should feel guilty when I do not meet their expectations”), love withdrawal (5 items; e.g., “If I do something my parents don’t like, they become cold and distant”), and authority assertion (3 items; e.g., “My parents insist that what they want me to do is best, and I should not question them”). Adolescents rated each item on a 5-point Likert scale (1 = “not at all true” to 5 = “very true”). A mean score across all items was computed, with higher values reflecting higher perceived psychological control ($\alpha=0.91$).

Internalizing Problems. Adolescents’ internalizing symptoms were assessed using the Chinese version of the Youth Self Report (YSR) developed by Achenbach⁴⁹. The internalizing problems index comprises three subscales: anxious/depressed (15 items; e.g., “I worry a lot”; $\alpha=0.87$), withdrawn (8 items; e.g., “I’d rather be alone than with anyone else”; $\alpha=0.84$), and somatic complaints (9 items; e.g., “I have nightmares”; $\alpha=0.83$). Responses were given on a 3-point scale (0 = “not at all,” 1 = “a little,” 2 = “a lot”). The mean score across all 32 items was calculated, with higher scores indicating more severe internalizing problems.

	M (SD)	Skewness	Kurtosis	1	2	3	C. gender	C. age	P. gender	P. age	Edu.	Job	FT	NOC
1.PB	1.30(1.01)	1.04	0.74	–			–0.08**	–0.01	0.01	–0.06**	–0.18**	–0.07**	0.05*	0.12**
2.Psy. Con.	2.24(0.85)	0.89	0.39	0.19**	–		–0.01	0.04*	–0.02	0.05*	–0.03	0.04	0.04	0.04
3.INT	0.28(0.26)	1.33	1.72	0.15**	0.381**	–	0.10**	0.04	0.01	0.07**	0.03	0.10**	0.06**	–0.02
4.Psy. Cap.	4.81(1.15)	–0.34	–0.38	–0.16**	–0.10**	–0.32**	–0.05*	–0.04	0.01	0.02	0.15**	0.01	–0.04	–0.06**

Table 1. Descriptive statistics and pearson correlations between variables ($N=2236$). Note. PB = parental burnout, Psy. Con = psychological control, INT = internalizing problems, Psy. Cap = psychological capital, C. gender = children’s gender (i.e., 0 = male, 1 = female), C. age = children’s age, P. gender = parents’ gender (i.e., 0 = male, 1 = female), P. age = parents’ age, Edu. = parents’ education attainment, Job = job type (i.e., 0 = no work, 1 = part-time job, 2 = full-time job), FT = family type (0 = two parents biological families, 1 = single parent families, 2 = remarried families), NOC = number of children; * $p<0.05$, ** $p<0.01$, *** $p<0.001$.

Psychological Capital. Adolescents' psychological capital was measured using a 26-item scale developed by Zhang et al.⁵⁰, based on the theoretical framework of Luthans et al.³⁴. The scale captures four components: self-efficacy (7 items; e.g., "I have confidence in my ability"), resilience (7 items; e.g., "I bounce back quickly when I encounter setbacks"), hope (6 items; e.g., "I'm working hard to achieve my goals"), and optimism (6 items; e.g., "I always look on the bright side of things"). Participants responded on a 7-point Likert scale (1 = "strongly disagree" to 7 = "strongly agree"). The mean of all items was computed, with higher scores indicating stronger psychological capital ($\alpha = 0.91$). This scale has been widely used with Chinese adolescent populations^{51,52}.

Demographic variables. Parents reported their gender, age, educational level, employment status (full-time, part-time, unemployed), family structure (two-parent biological, single-parent, remarried), and number of children. Adolescents reported their gender and age. These variables were included as covariates in all analyses given their potential associations with key outcomes, as suggested by prior studies^{5,10,28}.

Data analyses

First, we examined the basic associations between parental burnout and adolescents' internalizing problems using SPSS 25.0. Descriptive statistics, Pearson correlations, and multiple linear regressions were conducted. Scale scores were computed as the mean across each measure. Demographic variables were included as covariates, including adolescents' gender and age, parents' gender and age, parental education, family type, and the number of children.

For analytic purposes, reports from mothers (91.5%) and the small minority of fathers (8.5%) were pooled. Parent gender (mother = 1, father = 0) was included as a covariate in all regression and SEM analyses to adjust for potential gender differences. This approach ensured stable estimation given the very small proportion of father reporters and the absence of paired mother–father data within families. In earlier robustness checks, excluding father reports or adjusting for parent gender left the pattern and significance of the focal paths substantively unchanged, indicating that our conclusions do not hinge on the small father subsample.

Second, we tested the mediating role of psychologically controlling parenting in the relationship between parental burnout and adolescent internalizing problems, using structural equation modeling (SEM) in Mplus 7.4⁵³. Confirmatory factor analysis (CFA) was first conducted to confirm the adequacy of the measurement model following the guidelines of Byrne⁵⁴. Then, we tested structural models including: (a) a direct path from parental burnout to internalizing problems, and (b) an indirect path via psychological control.

The indirect effect was evaluated using bias-corrected bootstrapping with 5,000 samples⁵⁵. Mediation was considered significant if the 95% confidence interval (CI) for the indirect effect did not contain zero. Model fit was assessed using multiple indices: the Chi-square statistic (χ^2), Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). Acceptable fit was defined as CFI and TLI > 0.90, RMSEA and SRMR < 0.10; excellent fit was indicated by CFI and TLI > 0.95, RMSEA < 0.06, and SRMR < .08^{56,57}.

Third, we examined whether adolescents' psychological capital moderated the direct and indirect pathways using a Latent Moderated Structural Equations (LMS) approach^{58,59} implemented in Mplus 7.4. This approach does not require manual construction of interaction terms and provides robust estimates for latent variable interactions.

Model fit comparisons were conducted using the log-likelihood difference test (Δ -2LL) to compare:

Model 1: mediation model with only main effects.

Model 2: moderated mediation model including latent interaction terms (burnout $\times$ PsyCap; control $\times$ PsyCap).

A significant Δ -2LL supports the inclusion of latent moderation effects. Simple slope analyses were used to visualize the nature of significant interactions by testing model estimates at high (+ 1 SD) and low (−1 SD) levels of psychological capital⁶⁰.

All analyses were conducted using maximum likelihood (ML) estimation with robust standard errors. This estimator performs adequately under moderate departures from normality (skewness < 2; kurtosis < 7)^{61,62}. Missing data diagnostics (Little's MCAR test) indicated deviations from MCAR, $\chi^2(67,626) = 81,339.85$, $p < 0.001$. Given the plausibility of missing at random (MAR), we handled missingness in the SEMs using full-information maximum likelihood (FIML)⁶³. All structural models included demographic covariates to enhance the robustness of estimates.

Data availability

The datasets generated during and/or analyzed during the current study are not publicly available due to participant confidentiality, but are available from the corresponding author on reasonable request.

Results

Descriptive statistics and correlations

Table 1 reports the descriptive statistics and bivariate correlations among all major study variables. Several patterns emerged that are consistent with our hypotheses.

First, higher levels of parental burnout were significantly associated with greater adolescent-perceived psychological control and with elevated internalizing problems.

Second, psychologically controlling parenting was positively related to adolescents' internalizing symptoms (anxiety, withdrawal, somatic complaints), consistent with the proposed mediating pathway.

Third, adolescents' psychological capital showed a robust negative association with internalizing problems and was also negatively correlated with parental burnout and psychological control.

Fourth, several demographics were meaningfully associated with the focal constructs. Girls reported higher internalizing problems than boys, and boys scored higher on psychological capital. Older adolescents perceived slightly higher psychological control from parents. Parents of boys reported greater burnout.

Fifth, parental education was negatively correlated with parental burnout and positively associated with adolescents' psychological capital, whereas its association with psychological control was small and not statistically significant. Parental age was negatively related to burnout and showed a small positive correlation with psychological control, but its association with adolescents' psychological capital was not significant. Families with more children reported higher burnout; adolescents from two-parent biological families reported lower parental burnout and fewer internalizing symptoms. Parental employment status showed small associations with burnout and internalizing problems.

Together, these correlations suggest meaningful links among parental burnout, parenting style, adolescent resilience, and emotional adjustment, providing a strong rationale for subsequent modeling analyses.

Parental burnout and internalizing problems in early adolescents

The first analysis examined whether parental burnout significantly predicted internalizing problems among early adolescents. A hierarchical linear regression was conducted, entering demographic covariates in the first step—including adolescents' gender, parental age, parental job type, and family structure—and parental burnout in the second step.

The results indicated that higher levels of parental burnout were significantly associated with greater internalizing symptoms in adolescents ($\beta = 0.173$, $t = 8.35$, $p < 0.001$), even after controlling for relevant covariates. This finding supports the hypothesis that parental psychological exhaustion and detachment contribute to youth emotional distress, underscoring the developmental consequences of burnout within the family context.

The mediating role of psychological control in the relationships between parental burnout and adolescents' internalizing problems

Before testing the mediation hypothesis, confirmatory factor analysis (CFA) was conducted to validate the measurement model, which included four latent constructs: parental burnout (indicated by emotional exhaustion, emotional distancing, contrast with previous parental self, and parental fed-up feelings), psychological control (indicated by guilt induction, authority assertion, and love withdrawal), internalizing problems (indicated by anxious/depressed, withdrawn, and somatic complaints), and psychological capital (indicated by self-efficacy, resilience, optimism, and hope). The CFA results indicated a good model fit: $\chi^2(70) = 271.33$, CFI = 0.989, TLI = 0.985, SRMR = 0.026, RMSEA = 0.036, 90% CI [0.031, 0.040]. All standardized factor loadings were statistically significant ($ps < 0.001$), as shown in Table 2.

Correlational analyses between latent constructs (Table 3) revealed that parental burnout was positively associated with both psychological control and internalizing problems. Psychological control was also positively correlated with internalizing problems. In contrast, psychological capital was negatively associated with all three constructs, supporting the expected protective function of psychological capital in adolescent adjustment.

To test the mediation model, structural equation modeling (SEM) was conducted. In the first step, the direct effect of parental burnout on adolescents' internalizing problems was tested after controlling for covariates

Variables	Beta	SE	t	β
Parental burnout				
Exhaustion	0.90	0.02	49.07	0.85***
Contrast	1.08	0.02	55.36	0.92***
Feelings	0.93	0.02	51.69	0.88***
Distancing	0.97	0.02	45.19	0.81***
Psychological control				
Guilt induction	0.80	0.02	49.97	0.91***
Authority assertion	0.67	0.02	37.91	0.74***
Love withdrawal	0.86	0.02	38.70	0.75***
Internalizing problems				
Anxious/Depressed	0.26	0.01	42.92	0.81***
Withdrawn	0.18	0.01	33.82	0.67***
Somatic complaints	0.29	0.01	50.91	0.92***
Psychological capital				
Self-efficacy	0.99	0.02	42.66	0.79***
Resilience	1.22	0.04	35.01	0.71***
Hope	1.11	0.02	48.20	0.88***
Optimism	1.04	0.02	43.73	0.80***

Table 2. Standardized loadings. Note: exhaustion = exhaustion in one's parental role, contrast = contrast with previous parental self, feelings = feelings of being fed up with one's parental role, distancing = emotional distancing from one's children; *** $p < 0.001$.

	1	2	3
1.PB	–		
2.Psy. Con.	0.21***	–	
3.INT	0.17***	0.42***	–
4.Psy. Cap.	–0.19***	–0.10***	–0.36***

Table 3. Correlations among latent variables. The standardized coefficients were shown; PB = parental burnout, Psy. Con = psychological control, INT = internalizing problems, Psy. Cap = psychological capital; *** $p < 0.001$.

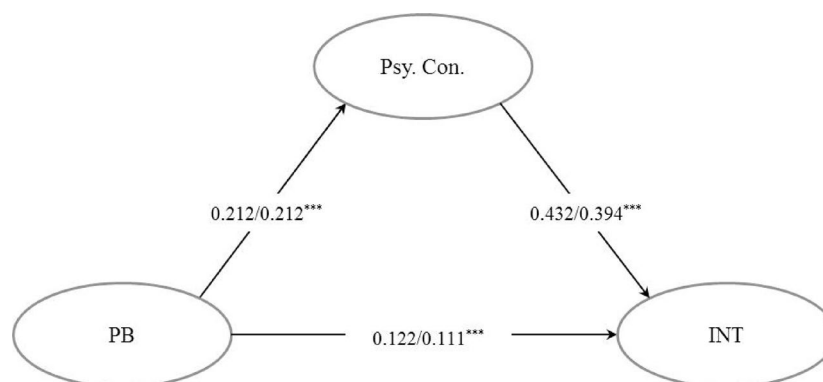


Fig. 3. Psychological control mediated the effects of parental burnout on early adolescents' internalizing problems. Note: The indicators on each latent variable and the covariates (i.e., adolescents' gender, parents' age, job type, and family type) in the model were not shown for ease of presentation. PB = parental burnout, Psy. Con = psychological control, INT = internalizing problems; Unstandardized and Standardized coefficients are presented; *** $p < 0.001$.

(i.e., adolescents' gender, parental age, job type, and family structure). The model demonstrated good fit: $\chi^2(45) = 120.15$, CFI = 0.992, TLI = 0.989, SRMR = 0.013, RMSEA = 0.027, 90% CI [0.021, 0.033]. Parental burnout significantly predicted adolescents' internalizing symptoms ($\beta = 0.194$, 95% CI [0.150, 0.243], $p < 0.001$).

In the second step, psychological control was added as a mediator. The model also exhibited excellent fit: $\chi^2(90) = 236.93$, CFI = 0.989, TLI = 0.986, SRMR = 0.019, RMSEA = 0.027, 90% CI [0.023, 0.031]. As illustrated in Fig. 3, the indirect effect of parental burnout on internalizing problems via psychological control was significant ($\beta = 0.092$, 95% CI [0.069, 0.118], $p < 0.001$), as was the direct effect ($\beta = 0.122$, 95% CI [0.074, 0.171], $p < 0.001$). These results suggest a partial mediation, indicating that psychologically controlling parenting partially explains the pathway through which parental burnout influences adolescents' internalizing outcomes. Hypothesis 2 was thus supported.

Adolescent psychological capital's moderating role in the association between parental burnout and adolescents' internalizing problems

To examine whether adolescent psychological capital moderated the indirect effect of parental burnout on internalizing problems via psychological control, we first tested a baseline mediation model including the main effects of all variables (Model 1). The model showed good fit: $\chi^2(158) = 623.34$, CFI = 0.974, TLI = 0.969, SRMR = 0.047, RMSEA = 0.036, 90% CI [0.033, 0.039].

Next, in Model 2, we introduced interaction terms between latent variables (i.e., Parental Burnout $\times$ Psychological Capital and Psychological Control $\times$ Psychological Capital) based on the LMS (Latent Moderated Structural Equations) framework. Model fit was assessed using the log-likelihood ratio test. Compared with Model 1 (LogL = -31293.48), Model 2 with interaction terms (LogL = -31288.36) showed a significantly better fit, LR = 10.24, $\Delta df = 2$, $p < 0.01$, supporting the inclusion of moderating effects.

Further path estimates indicated that adolescent psychological capital significantly moderated the effect of psychological control on internalizing problems ($\beta = -0.141$, $p < 0.001$, 95% CI [-0.180 , -0.109]), but did not significantly moderate the direct relationship between parental burnout and internalizing problems ($\beta = 0.021$, $p > 0.05$, 95% CI [-0.019 , 0.054]). As illustrated in Fig. 4, psychological capital moderated the latter stage of the mediation process, thereby partially supporting Hypothesis 3.

To further probe this moderation, we conducted a simple slope analysis. For adolescents with high psychological capital (+1 SD), the indirect effect of parental burnout on internalizing problems via psychological control was reduced (indirect effect = 0.044, $p < 0.001$, 95% CI [0.028, 0.059]). In contrast, for adolescents with low psychological capital (−1 SD), the indirect effect was significantly stronger (indirect effect = 0.108, $p < 0.001$, 95% CI [0.081, 0.135]). As illustrated in Fig. 5, psychologically controlling parenting predicted more internalizing symptoms in adolescents with lower psychological capital, but this relationship was substantially attenuated among those with higher psychological capital.

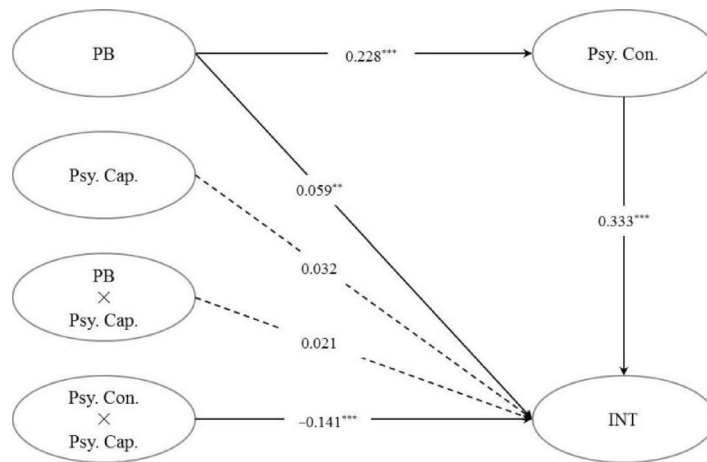


Fig. 4. Moderating effects of adolescents' psychological capital on the link between parental burnout and adolescents' internalizing problems. *Note:* The covariates in the model were not shown for ease of presentation. PB = parental burnout, Psy. Con = psychological control, INT = internalizing problems, Psy. Cap = psychological capital. The dotted line indicates a non-significant path. Unstandardized and standardized coefficients are presented; ** $p < 0.01$, *** $p < 0.001$.

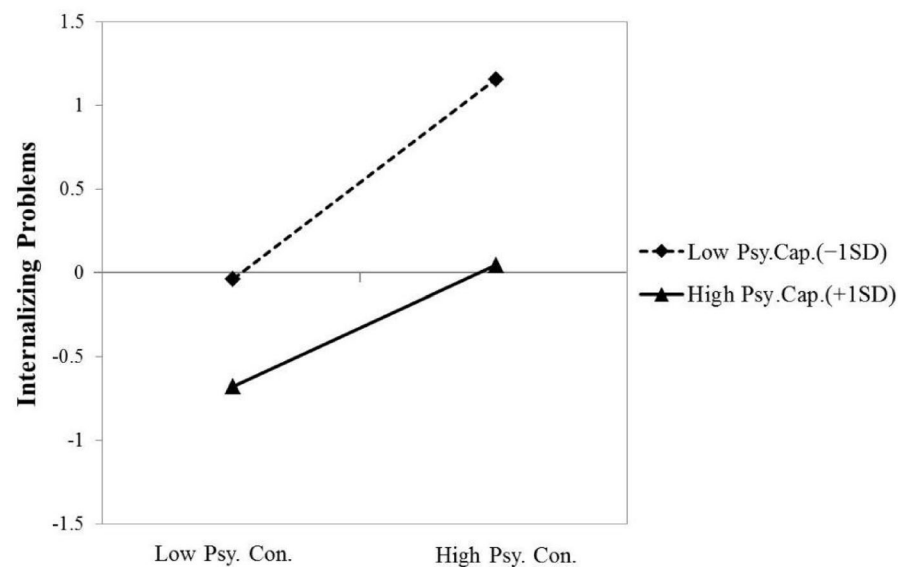


Fig. 5. Psychological control $\times$ psychological capital interaction on early adolescents' internalizing problems. *Note:* Functions were graphed using standardized values for two levels of psychological control and psychological capital: one SD above the mean and one SD below the mean. Psy. Con = psychological control, Psy. Cap = psychological capital.

In sum, while parental burnout increased adolescents' internalizing symptoms through psychologically controlling parenting, this indirect effect was significantly buffered by adolescent psychological capital. These findings highlight the protective role of psychological capital as a resilience factor in adverse parenting contexts.

Discussion

Parental burnout—a chronic and emotionally taxing state stemming from overwhelming parental demands—has emerged as a significant factor shaping the emotional well-being of children and adolescents¹⁵. This study tested three linked hypotheses: (a) higher parental burnout would be associated with greater adolescent internalizing problems; (b) psychologically controlling parenting would mediate this association; and (c) adolescents' PsyCap would moderate the indirect path via psychological control. Results supported (a) and were consistent with (b), indicating a significant statistical indirect association via psychological control. They also indicated that PsyCap moderated the mediated path (burnout→psychological control→internalizing) but not the direct path from parental burnout to adolescent symptoms.

Parental burnout and adolescents' internalizing problems

In line with prior research, the results confirmed that higher levels of parental burnout were significantly associated with greater internalizing problems in early adolescents^{12,64,65}. This supports the view that emotionally exhausted parents may be less likely to provide the warmth, stability, and autonomy support that are essential for healthy adolescent development. The silent and invisible nature of burnout—often manifested through emotional withdrawal rather than overt hostility—may result in an emotionally barren family climate, where adolescents feel unsupported and misunderstood. Rather than occasional conflict, the persistent emotional unavailability could contribute to chronic psychological insecurity in youth.

Psychological control as a mediator

Our findings further underscore that psychological control mediates the link between parental burnout and adolescents' internalizing problems. This aligns with Deater-Deckard's⁶⁶ model positing that parental stress is transmitted to children through distorted parenting practices. When burned out, parents may unwittingly use guilt, love withdrawal, or authority imposition as coping strategies to maintain family order or regulate their own emotional instability^{17,67}. While prior studies focus on neglect or harshness as outcomes of burnout⁵, our findings highlight more covert forms of emotional coercion. These findings are consistent with SDT¹⁸, even though basic psychological need satisfaction and frustration were not directly assessed, and thus the SDT account is best viewed as a plausible interpretation. Accordingly, SDT mechanisms are construed as theoretically consistent rather than empirically adjudicated in the present study.

PsyCap as a moderator

Importantly, adolescents' PsyCap moderated the indirect effect of parental burnout on internalizing symptoms via psychological control. Adolescents with higher PsyCap—comprising hope, optimism, resilience, and self-efficacy—were less affected by psychologically controlling parenting. This finding echoes the stress-buffering model⁶⁸ and resilience literature⁴⁵, emphasizing how internal strengths can reframe external stressors. Notably, this moderation effect did not extend to the direct path between parental burnout and adolescent symptoms, possibly because adolescents are less aware of their parents' internal states compared to observable behaviors. Thus, while PsyCap shields adolescents from psychologically controlling parenting, it may be less effective against more latent familial stress. To better interpret this pattern and identify intervention targets, we consider how certain adolescents develop relatively high PsyCap despite heightened family stress.

Despite elevated family stress, some adolescents develop relatively high PsyCap. This resilience appears to be supported at multiple levels. At the extra-familial level, teacher and peer support, school connectedness, and mentoring are robustly associated with better emotional adjustment and lower depressive symptoms in adolescence, providing compensatory scaffolding when parental resources are strained⁶⁹. Within school contexts, skills-building initiatives cultivate the HERO components (hope, efficacy, resilience, optimism): universal social-emotional learning and resilience programs are linked to improved internalizing outcomes and coping skills, and brief interventions can bolster hope, efficacy, and optimism^{39,41,42}. At the family level, elements of a positive climate—warmth, predictable routines, and supportive communication—prospectively predict higher PsyCap and better well-being among school-aged youth^{35,36}. Taken together, these strands of evidence converge on the view that PsyCap is developable and can be sustained by school and community contexts, as well as by specific features of family climate, even when parental burnout is present. This helps contextualize our moderation result: adolescents in more supportive contexts tend to have higher PsyCap; in turn, the association between psychologically controlling parenting and internalizing problems is weaker.

Implications for practice and policy: toward emotionally sustainable parenting

In practice, schools, pediatric/primary care settings, and community agencies can implement brief screening for parental burnout and provide stepped supports (e.g., stress-management resources, referral pathways, peer/parent groups) to reduce caregiver overload before reliance on psychologically controlling practices becomes entrenched. Parenting programs should shift from a focus on behavioral compliance to emotional sustainability, emphasizing autonomy-supportive communication, warmth, and predictable routines, while discouraging psychologically controlling parenting (e.g., guilt induction, love withdrawal). Training in parental emotion regulation and reflective functioning may further reduce reliance on such strategies under stress.

On the adolescent side, psychological capital interventions (PCI) can be embedded in school curricula to strengthen hope, efficacy, resilience, and optimism through goal setting, cognitive reappraisal, problem-solving, guided visualization, and emotional reframing⁷⁰. PCI should complement, not replace, caregiver-focused supports, with the aim of buffering the impact of psychologically controlling parenting on internalizing symptoms. Because risk and protection operate on both sides of the dyad, coordinated, dual-pathway programs that address parental stress and adolescent strengths, and that link schools with health and community services, may be more effective than single-focus approaches. These recommendations derive from associations rather than causal tests and from adolescents' perceptions of psychological control; basic psychological need satisfaction was not directly measured. Accordingly, implementation should be paired with rigorous evaluation (e.g., longitudinal or experimental designs, multi-informant measurement, parent-specific analyses, and context-sensitive adaptation).

Contributions and implications for theory and research

This study contributes to theory and method in an integrated way. Theoretically, it situates parental burnout within a developmental psychopathology framework that links family stress theory, SDT, and resilience/strengths perspectives. It advances a dual-process view—stress as risk and psychological capital as protection.

Parental burnout is associated with adolescents' internalizing problems partly via psychologically controlling parenting, and adolescents' PsyCap attenuates this indirect (mediated) path.

Methodologically, we used a large parent–adolescent dyadic sample and latent-variable models. This design enhanced measurement precision and helped mitigate single-informant bias. Evidence from a non-Western context also broadened the cultural scope of research on family stress and adolescent adjustment. More broadly, the pattern is consistent with bidirectional family emotional dynamics in high-demand contexts. It underscores the value of models that consider caregiver well-being alongside youth strengths, and it motivates tests of generalizability across sociocultural settings.

Limitations and future directions

Notwithstanding these strengths, several limitations warrant caution. A primary limitation concerns the cross-sectional design. It precludes causal inference and temporal ordering. Longitudinal or experimental work (e.g., interventions targeting parental burnout or adolescent PsyCap) is needed to test directional and reciprocal effects. A measurement caveat is that the mediator relied on adolescents' reports of psychologically controlling parenting, and basic psychological need satisfaction and frustration were not directly assessed. Thus, SDT-based mechanisms should be viewed as plausible rather than established; incorporating validated SDT measures would allow explicit tests of this pathway. A further concern pertains to shared method variance and unmeasured confounds (e.g., family climate, socioeconomic stress) despite the dyadic design. Including family income as a covariate and reporting descriptive income statistics (mean/median) would help reduce residual confounding. Analytically, we combined mothers' and fathers' reports in the primary analyses to increase stability under sample-size imbalance. Parent-specific effects may nonetheless differ; future studies should disaggregate maternal and paternal burnout and control (e.g., using the actor–partner interdependence model, APIM) to test parent-specific pathways. In terms of generalizability, the sample was drawn from a single non-Western context. Replication across cultural settings is needed to evaluate generalizability and potential cultural moderators. Finally, moderation by PsyCap was observed for the indirect path but not for the direct path. Alternative explanations (e.g., adolescents' greater awareness of observable parenting vs. latent parental distress) should be examined, and longitudinal designs should test whether within-person increases in PsyCap prospectively attenuate risk. All inferences are associational; directional and reciprocal processes await confirmation in longitudinal or experimental designs.

Conclusions

This study sheds light on a nuanced and often overlooked pathway through which parental burnout may affect adolescent mental health: not through direct harm, but through the subtle erosion of autonomy caused by psychologically controlling parenting. By integrating stress-process theory with the positive psychological framework of resilience, we demonstrate that the negative impact of parental burnout is not inevitable—it is mediated, and critically, it is conditionally buffered.

The identification of psychological capital as a moderating resource adds a crucial layer to existing theories of adolescent adaptation. Adolescents are not mere recipients of family stress; they are active meaning-makers who possess internal resources to reframe and resist harmful dynamics. Our findings suggest that strengthening such resources may be just as important as reducing parental strain when it comes to promoting adolescent well-being.

Beyond the academic contribution, this research calls for a redefinition of what “parental harm” looks like in modern families. Psychological control, shaped by parental fatigue, can be as corrosive as overt neglect. Therefore, strategies to support family functioning must focus not only on reducing parental exhaustion but also on promoting emotionally sustainable parenting and enhancing adolescents' inner resilience.

In short, when the home becomes emotionally unstable, youth need not be defenseless. Empowering adolescents with psychological tools is not only a therapeutic goal—it is a social imperative.

Data availability

The datasets generated during and/or analyzed during the current study are not publicly available due to participant confidentiality, but are available from the corresponding author on reasonable request.

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Declarations

Competing interests

The authors declare no competing interests.

Additional information

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