

Father Involvement and Emotion Regulation Difficulties among Minangkabau Adolescent Girls: The Mediating Role of Psychological Well-Being

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Abstract. This study examined the relationship between father involvement and emotion regulation difficulties among Minangkabau adolescent girls, with psychological well-being as a mediator. Participants were 433 female adolescents aged 12–18 years who completed standardized self-report measures of father involvement, psychological well-being, and emotion regulation difficulties. Results showed that higher father involvement was associated with fewer emotion regulation difficulties and greater psychological well-being. Psychological well-being was strongly and negatively related to emotion regulation difficulties. Mediation analysis indicated that psychological well-being partially mediated the relationship between father involvement and emotion regulation difficulties. These findings highlight the central role of psychological well-being in adolescent emotional adjustment and underscore the importance of father involvement within a matrilineal cultural context.

Keywords: father involvement, psychological well-being, emotion regulation, female adolescents, Minangkabau culture

1 Introduction

Recent concurrent developments increase adolescents' vulnerability to emotional fluctuation, stress, and less adaptive coping mechanisms compared to other age cohorts. As a result, proficient emotion regulation—defined as the capacity to understand, manage, and appropriately adapt emotional responses according to situational demands—becomes a critical developmental milestone [1]. Challenges in emotion regulation during adolescence are linked to an increased risk of adverse outcomes, such as depression, anxiety, aggressive behavior, interpersonal conflicts, self-harming actions, impulsivity, and enduring mental health concerns [2, 3].

Difficulties in emotion regulation have been identified as significant predictors of various psychological issues among adolescents, including anxiety and depression [4]. Adolescence represents a pivotal stage characterized by rapid development of the emotional regulation system, which is notably shaped by the social context, with family influence being particularly substantial. In response to these vulnerabilities, contemporary research has increasingly sought to determine factors that mitigate the risk of emotion regulation difficulties in adolescents. Family dynamics—especially parenting practices—have emerged consistently as crucial determinants of emotional wellbeing. Parents contribute significantly to adolescents' emotional development through modelling effective coping mechanisms, ensuring emotional security, establishing behavioral guidelines, and addressing emotional needs. While maternal roles have traditionally received greater attention in studies of adolescent emotional growth, recent scholarship underscores the distinctive and irreplaceable contributions of fathers in supporting adolescents' psychological and emotional adjustment [5].

Father involvement encompasses not only physical presence and financial provision, but also emotional engagement, warmth, effective communication, consistent monitoring, shared activities, and responsiveness to children's needs. The paternal role has evolved beyond being solely a provider, now extending into emotional and social caregiving responsibilities. Global research consistently demonstrates that positive father involvement is associated with beneficial developmental outcomes, such as improved psychological well-being, resilience, and social adjustment [5, 6]. Furthermore, father involvement fosters a sense of security and serves as a model for healthy social interactions, establishing a crucial foundation for psychological health [7].

Empirical studies indicate that father involvement supports adolescents' academic achievement, psychological resilience, prosocial behavior, and mental health. Adolescents who experience greater paternal engagement typically exhibit enhanced impulse control, higher self-esteem, and reduced emotional distress [8]. Additionally, research suggests that fathers influence their children's emotional functioning through distinct socialization practices compared to mothers. Fathers are more likely to encourage healthy risk-taking, exploration of new environments, and regulation of emotional arousal during stimulating activities, all of which contribute to the development of emotional competence.

Despite recent findings linking father involvement to adolescents' emotion regulation, the mechanisms behind this association are not well understood. Research often lacks causal analysis, especially regarding psychological well-being as a mediator. Existing studies mostly focus on

Western contexts, leaving gaps for non-Western settings like the Minangkabau. Psychological well-being, which includes self-acceptance, purpose, personal growth, mastery, autonomy, and relationships, is emerging as a central mechanism and reflects deeper aspects of resilience, self-efficacy, and meaning-making beyond mere happiness [9].

Father involvement may contribute to adolescents' psychological well-being by providing emotional security, modeling effective problem-solving approaches, fostering autonomy, and facilitating positive relational experiences. Adolescents who perceive substantial paternal support frequently report elevated self-confidence, enhanced identity development, and increased life satisfaction [10]. These psychological strengths may subsequently support more effective emotion regulation through the promotion of adaptive coping mechanisms, cognitive reappraisal capabilities, and a robust sense of internal stability [11].

Despite the theoretical appeal of this model, empirical research evaluating this pathway remains limited. Existing literature on father involvement predominantly addresses behavioral, academic, and general mental health outcomes, while investigations into internal psychological mechanisms—such as psychological well-being—are comparatively scarce. Furthermore, most studies examining the association between father involvement and emotion regulation have been conducted within Western contexts, resulting in a considerable gap in knowledge regarding these dynamics in culturally diverse settings. Culture significantly influences parenting practices, emotional socialization, and adolescents' psychological well-being. Parenting norms, the allocation of caregiving duties, and the emotional environment within families are closely linked to broader cultural values. The presumption that findings from Western populations are universally applicable has faced increasing scrutiny [12]. Accordingly, research on father involvement and emotional development within non-Western cultural contexts is vital to establish a more globally representative perspective on adolescent development.

The Minangkabau ethnic group in Indonesia constitutes the world's largest matrilineal society, where lineage, inheritance, and family structure are determined through the maternal line. This system places women—particularly maternal uncles and mothers—at the core of kinship networks. Nonetheless, fathers retain substantial roles within the household, particularly with respect to moral education, religious instruction, emotional support, discipline, and the shaping of social identity [13]. The result is a distinctive fusion of matrilineal family organization alongside patriarchal expectations regarding fatherhood. In contrast to systems that are exclusively patriarchal or matrilineal, the Minangkabau approach demonstrates a culturally hybrid arrangement in which both maternal and paternal contributions are significant, albeit differently defined [14].

This multifaceted cultural context provides an exceptional setting for investigating paternal involvement. While the father holds a pivotal role in fostering emotional and moral development, he does not primarily influence decisions related to lineage, which may affect how adolescents perceive and assimilate paternal support. It is noteworthy that empirical research on father–daughter relationships within Minangkabau families remains limited, as most existing studies emphasize the roles of mothers or the broader matrilineal family framework, leaving the psychological impact of fathers relatively unexplored.

Research focused on adolescent girls is crucial, as they generally experience greater emotional sensitivity, interpersonal stress, and vulnerability to internalizing problems than boys

[15]. These challenges are intensified by factors like rumination, heightened emotional awareness, and risks related to body image and perfectionism. In matrilineal societies such as the Minangkabau, paternal emotional involvement may play a key role in supporting girls' identity formation, emotional stability, and resilience.

Given these sociocultural and emotional dynamics, exploring how father engagement relates to emotion regulation—potentially mediated by psychological well-being—is essential for understanding this group. Despite its importance, limited research has examined the interplay between father involvement, psychological well-being, and emotion regulation among Minangkabau adolescent girls, marking a significant gap in both Indonesian and cross-cultural developmental studies. This study addresses that gap by providing culturally specific evidence on how Minangkabau fathers influence adolescent emotional development, clarifying mechanisms through which father involvement may reduce emotion regulation difficulties, and expanding the literature on Indonesian adolescent well-being. By integrating paternal involvement, psychological well-being, and emotional adjustment, this framework advances knowledge of protective factors in adolescence and supports the development of relevant interventions and policies.

1.1 Father Involvement and Adolescent Development

Father involvement has become a major focus of developmental research over the last two decades, supported by an expanding empirical base demonstrating its unique and irreplaceable contributions to children's and adolescents' psychological and socio-emotional development. In contrast to earlier conceptualizations that centered on fathers primarily as providers and authority figures, contemporary scholarship views father involvement as a multidimensional, dynamic construct encompassing emotional warmth, responsiveness, supportive communication, cognitive stimulation, and shared decision-making [5]. This broadened understanding reflects shifts in global family systems and aligns with evidence showing that engaged fathering benefits young people across a variety of developmental domains, particularly during adolescence.

Empirical studies across cultural settings consistently demonstrate that adolescents with more involved and emotionally available fathers exhibit more adaptive psychological adjustment, including greater self-esteem, lower levels of internalizing symptoms, and stronger emotional competence [16, 17]. These outcomes are not limited to Western populations. Cross-cultural research in Asia, Africa, and Latin America highlights similar patterns, indicating that paternal involvement exerts protective effects even in societies where traditional gender norms position fathers primarily as authority figures rather than emotional caregivers. Such findings underscore that father involvement is a universally relevant developmental resource, although its expression may vary according to sociocultural expectations.

Adolescence represents a particularly critical developmental stage in which the father's role becomes especially salient. This period is characterized by heightened emotional reactivity, increased sensitivity to interpersonal stress, and significant restructuring of cognitive, social, and neurological systems [18, 19]. Adolescents rely heavily on parental figures to navigate these transitions, and fathers play a distinct role in fostering autonomy, emotion regulation, and social competence [20]. Supportive father–daughter relationships, in particular, have been found to shape internal working models of trust, emotional safety, and relational security—factors that contribute to healthier emotional development and resilience in the face of stress [21, 22].

Recent Indonesian research aligns with global studies, showing that paternal warmth, involvement, and support help adolescents manage stress and build resilience, even though mothers are often primary caregivers. Fathers play a distinct emotional role in adolescent well-being, shaped by Indonesia's diverse cultural values. While father involvement is now recognized as important, the psychological mechanisms—especially regarding how it affects adolescents' emotion regulation difficulties—are still not well understood. Although supportive parenting links to better emotion regulation, few mediation studies have explored this in non-Western settings, where cultural norms around fatherhood and emotional expression influence outcomes [23].

Thus, while substantial evidence highlights the importance of father involvement for adolescent development, there remains a need to investigate how and under what cultural conditions paternal engagement influences adolescent emotional functioning. The present study addresses this gap by examining psychological well-being as a potential mediator linking father involvement to emotion regulation difficulties among Minangkabau adolescent girls—a culturally unique population where paternal roles intersect with matrilineal traditions and evolving modern expectations.

1.2 Psychological Well-Being in Adolescence

Psychological well-being (PWB) is a core concept in developmental psychology, emphasizing optimal functioning over just the absence of mental disorders. Ryff's [9] framework identifies six key dimensions: self-acceptance, purpose in life, autonomy, environmental mastery, personal growth, and positive relations. PWB supports adolescents through identity exploration and social changes, fostering resilience and adaptive functioning.

Research indicates that adolescents with higher PWB demonstrate greater emotional stability, self-regulation, and healthier relationships [24, 25]. PWB acts as a protective factor against psychological symptoms, encouraging positive affect and coping strategies like cognitive reappraisal and mindfulness [23, 26]. Those with high well-being are better equipped to handle stress and maintain emotional balance during change.

The social relational context—particularly relationships with parents—plays a fundamental role in shaping adolescents' psychological well-being. According to attachment theory, supportive parent-child interactions foster a sense of emotional security and internal working models that encourage autonomy and exploration [27, 28]. Although maternal support has long dominated the literature, an expanding body of research highlights the unique contribution of fathers to adolescents' emotional development. Paternal validation, warmth, and consistency are frequently linked with increased autonomy, competence, and relational security—three essential components identified by Self-Determination Theory as determinants of well-being [7]. Adolescents who experience high father involvement tend to report elevated levels of meaning in life, stronger identity coherence, and greater optimism about the future [29, 30].

In addition, fathers often serve as role models for emotion regulation, problem-solving, and behavioral control, which indirectly reinforces adolescents' psychological well-being. Studies show that fathers' involvement in everyday interactions—such as shared decision-making, emotional conversations, and collaborative problem-solving—helps adolescents internalize adaptive coping strategies and develop a stable emotional core [31]. Furthermore, cross-cultural work suggests that the father's role in shaping PWB transcends cultural boundaries, although the ways fathers express involvement differ widely across sociocultural contexts.

In collectivistic societies such as Indonesia, psychological well-being is deeply interwoven with social harmony, familial connectedness, and fulfilment of relational obligations. Adolescents are expected to align their behavior with cultural norms of respect, interdependence, and emotional restraint. Within this context, parents—and increasingly fathers—serve as key agents of moral guidance and emotional socialization. Paternal involvement is often perceived not merely as emotional support but also as a form of value transmission and identity reinforcement. Research on Indonesian adolescents shows that father involvement contributes meaningfully to adolescents' sense of self-worth, emotional stability, and long-term goal orientation.

Despite growing evidence linking paternal involvement to adolescents' psychological well-being, significant gaps remain. Most existing studies have examined general parenting or maternal influences, with relatively little attention to the distinctive role of fathers, particularly in adolescence. Even fewer studies have explored these dynamics within cultural contexts where gender roles and family structures differ from Western norms. In the Minangkabau matrilineal society—where mothers traditionally hold primary authority—fathers nevertheless remain important emotional and moral figures. However, the psychological pathways through which father involvement shapes PWB in such contexts remain understudied.

Moreover, there is limited empirical work investigating PWB as a mechanistic pathway linking father involvement to adolescents' emotional outcomes, including emotion regulation difficulties. Given that well-being is a strong predictor of adaptive emotional functioning, understanding its mediating role is essential for deepening theoretical insights and informing culturally grounded interventions.

1.3 Emotion Regulation Difficulties

Emotion regulation (ER) refers to a set of cognitive, behavioral, and physiological processes through which individuals influence the intensity, duration, and expression of emotional experiences [32]. Within developmental science, ER is conceptualized as a multidimensional construct involving both automatic and deliberate strategies—such as reappraisal, suppression, problem-solving, and attentional control—that enable individuals to adaptively respond to environmental demands [2]. Adolescence represents a particularly sensitive period for the development of ER due to significant neurobiological, cognitive, and socio-emotional transitions. At the neurobiological level, ongoing maturation of the prefrontal cortex, coupled with heightened limbic system reactivity, widens the imbalance between emotional arousal and regulatory control [19]. This imbalance contributes to increased vulnerability to emotional dysregulation, especially in contexts that involve heightened social evaluation, conflict, or uncertainty—conditions that are common during adolescence [1].

Difficulties in emotion regulation have been extensively linked to negative developmental outcomes. Adolescents with higher levels of ER difficulties tend to exhibit increased internalizing symptoms (e.g., anxiety, depression), externalizing behaviors (e.g., aggression, impulsivity), and maladaptive coping patterns [33]. Furthermore, a growing body of longitudinal evidence indicates that ER difficulties predict poorer academic functioning, impaired peer relationships, and reduced resilience in the face of stress [34, 35]. These findings underscore the central role of ER in shaping adolescents' psychological well-being, highlighting the importance of identifying familial factors that may buffer or exacerbate regulatory difficulties.

Within the family context, father involvement has emerged as a potentially influential factor in shaping adolescents' regulatory capacities. Several theoretical perspectives provide a basis

for this relationship. Attachment theory posits that sensitive and responsive caregiving promotes secure attachment, which in turn facilitates the development of internal working models that support emotion regulation and stress management [21]. Social learning theory suggests that fathers play an important role in modelling adaptive regulatory strategies, particularly in contexts involving risk-taking, conflict resolution, and emotional expression—areas in which fathers often engage differently than mothers [22, 36]. Family systems theory further emphasizes that paternal emotional availability and consistent engagement contribute to a stable and coherent family climate that fosters emotional competence [37].

Empirical findings provide partial support for these theoretical propositions. Several studies demonstrate that paternal warmth, involvement, and positive communication predict higher emotional competence and lower emotion regulation difficulties among adolescents [22, 30]. Paternal behaviors such as emotion coaching, validation, and collaborative problem-solving have been shown to directly enhance adolescents' ability to identify, interpret, and regulate emotional states [38]. Moreover, father–child interactions involving shared activities and open communication have been associated with greater use of adaptive ER strategies, including reappraisal and constructive coping [31].

However, empirical evidence remains inconsistent. Some studies suggest that maternal factors remain more influential in shaping adolescents' emotion regulation due to higher emotional attunement or greater involvement in daily caregiving routines [38, 39]. Others indicate that the role of fathers may vary depending on cultural context, gender norms, and the developmental stage of the child. In collectivistic societies such as Indonesia, paternal roles may be influenced by socio-cultural expectations that emphasize paternal authority, discipline, or economic provision rather than emotional support. These contextual nuances may explain why the strength and direction of father involvement effects differ across populations.

Research increasingly recognizes that fathers play a distinct role in adolescents' emotional development, often through physical play, new experiences, and support during stress, which can improve their emotion regulation [40]. Father involvement may therefore help reduce difficulties in emotion regulation and protect psychological well-being. However, more research is needed on how fathers influence adolescent emotion regulation, especially in non-Western contexts where paternal roles are changing, to guide culturally relevant interventions.

1.4 Father Involvement, Psychological Well-Being, and Emotion Regulation: A Mediated Relationship

The interplay between father involvement, psychological well-being, and emotion regulation in adolescence can be understood through several complementary theoretical frameworks, including attachment theory, self-determination theory, and emotion regulation models. Collectively, these perspectives suggest that psychological well-being (PWB) serves as a critical intrapersonal resource that mediates the association between supportive paternal relationships and adolescents' regulatory capacities. Ryff [9] conceptualize PWB as encompassing positive self-regard, autonomy, mastery, and meaningful relationships—dimensions that are shaped substantially by the quality of familial interactions. In adolescence, a developmental period marked by identity exploration and heightened emotional intensity, PWB becomes a central mechanism through which interpersonal experiences translate into adaptive emotional functioning [24, 25].

Father involvement is theorized to enhance adolescents' PWB by promoting feelings of being valued, understood, and emotionally secure. Fathers who demonstrate warmth, responsiveness, and consistent engagement foster a relational environment that supports adolescents' needs for autonomy, competence, and relatedness—core components of psychological flourishing according to self-determination theory [7]. Such paternal support strengthens adolescents' self-worth, emotional clarity, and sense of purpose, which subsequently contribute to greater emotional stability and resilience [29]. This is particularly relevant in adolescence, when the capacity for emotional self-regulation is still developing and is highly sensitive to the quality of parental interactions [18].

A growing body of empirical research supports the notion that PWB mediates the effects of family relationships on emotional functioning. These findings align with the broaden-and-build model [41], which posits that positive emotional states—often cultivated within supportive family environments—broaden cognitive and behavioral repertoires, thereby enhancing regulatory flexibility and adaptive coping.

In the context of emotion regulation, adolescents who experience higher levels of PWB are more likely to employ adaptive strategies such as cognitive reappraisal, problem-solving, and emotional acceptance [23, 26]. Positive psychological functioning enhances attentional control, reduces emotional reactivity, and promotes meaning-making processes that buffer stress. Conversely, low levels of PWB are associated with maladaptive regulation strategies, rumination, avoidance, and difficulties managing negative affect [33]. When fathers provide consistent emotional support, guidance, and validation, adolescents are better equipped to internalize positive beliefs about themselves and develop psychological strengths that reduce vulnerability to emotional dysregulation.

Research in matrilineal societies like Indonesia's Minangkabau reveals that fathers navigate both traditional and emerging roles, balancing patriarchal expectations with emotional involvement [13, 42]. While mothers and maternal relatives are central in child-rearing, fathers hold symbolic importance as moral guides and emotional supports rather than lineage authorities [43]. This distinct family structure prompts questions about how father involvement affects adolescent psychological well-being (PWB) and emotion regulation (ER) across cultures. More research is needed to clarify these culturally specific pathways. Overall, theory and evidence suggest that fathers' emotional engagement boosts adolescents' psychological resources, supporting their adaptive emotional development. Understanding this mediational role can guide culturally appropriate mental health interventions for youth.

2 Method

2.1 Research Design

This study employed a quantitative, cross-sectional design to examine the associations between father involvement, psychological well-being, and emotion regulation difficulties among adolescent girls. Mediation analysis was used to test whether psychological well-being functioned as an intervening mechanism linking father involvement to emotion regulation difficulties.

2.2 Participants

Participants were 433 adolescent girls aged 12-18 years who were enrolled in secondary schools in West Sumatra, Indonesia. The study intentionally focused exclusively on female adolescents due to well-documented gender differences in emotional development, psychological well-being, and vulnerability to emotion regulation difficulties during adolescence. Prior research consistently shows that adolescent girls exhibit higher levels of emotional reactivity, interpersonal sensitivity, and rumination compared to boys, placing them at greater risk for internalizing emotional difficulties. Inclusion criteria were: (a) female Minangkabau ethnicity, (b) age within the adolescent range, (c) currently living with or maintaining regular contact with their biological father or father figure, and (d) ability to complete self-report questionnaires independently. Participants with incomplete responses on key study variables were excluded from the final analyses.

Table 1. Demographic Characteristics of the Participants

Descriptions	Level	Frequency	Percent
Age	12	1	0.2
	13	16	3.6
	14	25	5.7
	15	118	27.2
	16	171	39.5
	17	83	19.1
	18	19	4.3
Currently living with	Father only	3	0.6
	Father & Mother	361	83.3
	Mother only	44	10.1
	Other relatives	25	5.7
Parent's level of education	Elementary School	19	4.3
	Junior High School	19	4.3
	Senior High School	186	42.9
	Diploma	32	7.3
	Bachelor's Degree	136	31.4
	Master	32	7.3
	Doctor	9	2.0
		433	100

As shown in Table 1, most participants were in middle adolescence, with the largest age groups being 16 years ($n = 171$) and 15 years ($n = 118$). Regarding living arrangements, the majority of participants lived with both parents ($n = 361$), while the remaining participants lived with their mother only, father only, or other family members. Because the sample consisted exclusively of female adolescents, gender was not included as a covariate in the analyses. Age was examined as a potential covariate given its association with emotion regulation development during adolescence.

In terms of parental education, most participants' parents had completed senior high school ($n = 186$) or held a bachelor's degree ($n = 136$), followed by smaller proportions with postgraduate, diploma, or lower educational levels. Overall, the sample represents female adolescents from the Minangkabau ethnic group, characterized by diverse family structures and parental educational backgrounds, providing a culturally grounded context for examining father involvement, psychological well-being, and emotion regulation.

2.3 Measures

Father Involvement

Father involvement refers to a father's participation in positive activities with his child, such as providing warmth, assisting the child in decision-making, monitoring and supervising the child's activities, and being responsible for and meeting the child's needs. Father involvement is measured by three components: (1) engagement, or the time spent by the father in direct interaction with the child across various positive activities; (2) accessibility, which is the father's involvement in the child's life, both physically and psychologically; and (3) responsibility, referring to a father's responsibility in parenting, encompassing the child's psychological well-being and participation in the child's daily decision-making [6]. Father involvement was measured using a Father Involvement Scale, assessing female adolescents' perceptions of their fathers' engagement in emotional support, supervision, and daily interactions. This scale consists of 27 items with response options ranging from strongly agree to strongly disagree. The instrument demonstrated excellent internal consistency (Cronbach's $\alpha = 0.929$).

Psychological Well-Being

Psychological well-being is a state in which an individual is mentally healthy and possesses several positive qualities of mental health, based on the dimensions described by Ryff [9]. Psychological well-being was assessed using a Psychological Well-Being (PWB) Scale based on Ryff's multidimensional framework, encompassing self-acceptance, environmental mastery, purpose in life, personal growth and positive relations with others. This scale consists of 27 items with response options ranging from strongly agree to strongly disagree. Reliability statistics in present study are indicating acceptable internal consistency (Cronbach's $\alpha = 0.788$). This level of reliability is consistent with prior research on multidimensional well-being constructs.

Difficulties in Emotion Regulation

Emotion regulation includes ability to identify, understand, and accept emotional experiences, control impulsive behaviors when distressed, and flexibility modulates emotional responses as situationally appropriate [44]. Difficulties in emotion regulation were measured using the Brief Version of Difficulties in Emotion Regulation Scale (DERS) [4]. This scale consists of 13 items

covering 4 subscales: lack of emotional clarity, difficulties engaging in goal-directed behavior, impulse control difficulties, limited access to effective emotion regulation strategies, and non-acceptance of emotional responses. The response options on this scale range from 1 (almost never) to 5 (almost always). DERS demonstrated excellent internal consistency (Cronbach's $\alpha = 0.932$) supporting its use in the present study.

All instruments were administered in Indonesian. When original measures were not available in Indonesian, a forward-backward translation procedure was employed. Translated versions were reviewed by bilingual experts in psychology to ensure semantic and conceptual equivalence. The psychometric properties of all scales were re-evaluated in the present sample to ensure cultural appropriateness for Indonesian adolescent girls.

Procedure

Data were collected during regular school hours with permission from school authorities. Participants completed the questionnaires in a classroom setting under researcher supervision. Participation was voluntary, and confidentiality was emphasized. The average completion time was approximately 20 minutes. Written informed consent was obtained from both participants and their parents or legal guardians prior to data collection. Participants were informed of their right to withdraw from the study at any time without penalty.

Data Analysis

Data analyses were conducted using JASP. Preliminary analyses included descriptive statistics and reliability analyses for all study variables. Because the sample consisted exclusively of female adolescents, gender was not included as a covariate. Age was examined as a potential covariate given its developmental relevance. Mediation analysis was conducted to test the indirect effect of father involvement on emotion regulation difficulties through psychological well-being. An indirect effect was considered statistically significant when the confidence interval did not include zero.

2.4 Result

Assumption Testing

Normality was assessed for standardized regression residuals rather than raw scores. Although Shapiro-Wilk tests on raw variables indicated statistically significant deviations from normality, visual inspection of histograms and Q-Q plots of residuals (Figure 1) showed approximately normal distributions. Given the large sample size, the normality assumption was considered satisfied.

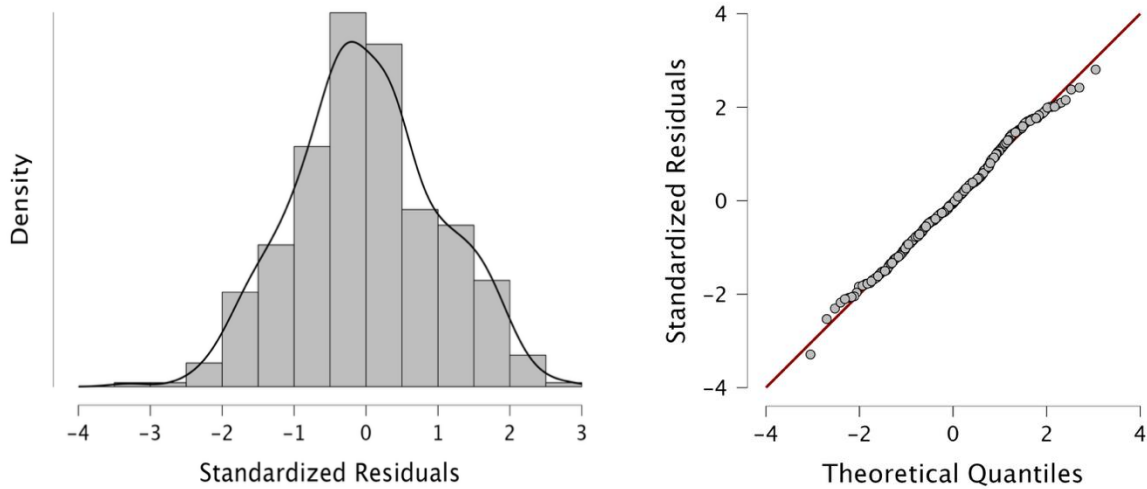


Figure 1. Histogram and Q-Q Plot of Standardized Residuals

Multicollinearity was examined using Variance Inflation Factor (VIF) and tolerance values. All predictors showed VIF values below 2 and tolerance values above 0.20, indicating no multicollinearity concerns.

Table 1. Multicollinearity Testing

Model	Unstandardize d	Standard Error	Standardized	t	p	Collinearity Statistics	
						Tolerance	VIF
H ₀ (Intercept)	51.958	0.674		77.034	< .001		
H ₁ (Intercept)	116.871	5.418		21.571	< .001		
PWB	-0.771	0.075	-0.463	-10.295	< .001	0.856	1.168
FI	-0.087	0.043	-0.091	-2.015	0.045	0.856	1.168

Mediation analysis was conducted using path analysis with Maximum Likelihood (ML) estimation to test whether psychological well-being mediates the relationship between father involvement and difficulties in emotion regulation among Minangkabau female adolescents.

Table 2. Mediation Analysis

Effect	Path	Estimate	SE	z	p	95% CI
Direct	FI → DERS	-0.087	0.043	-2.022	.043	[-0.172, -0.003]

Effect	Path	Estimate	SE	z	p	95% CI
Indirect	FI → PWB → DERS	-0.169	0.026	-6.577	< .001	[-0.219, -0.119]
Total	FI → DERS	-0.256	0.045	-5.750	< .001	[-0.343, -0.169]

Mediation analysis was conducted to examine whether psychological well-being mediates the relationship between father involvement and difficulties in emotion regulation. The results revealed a significant direct effect of father involvement on DERS ($\beta = -0.087$, $p = .043$). In addition, the indirect effect of father involvement on DERS through psychological well-being was significant ($\beta = -0.169$, $p < .001$), with a 95% confidence interval that did not include zero. The total effect of father involvement on DERS was also significant ($\beta = -0.256$, $p < .001$). These findings indicate that psychological well-being partially mediates the association between father involvement and difficulties in emotion regulation.

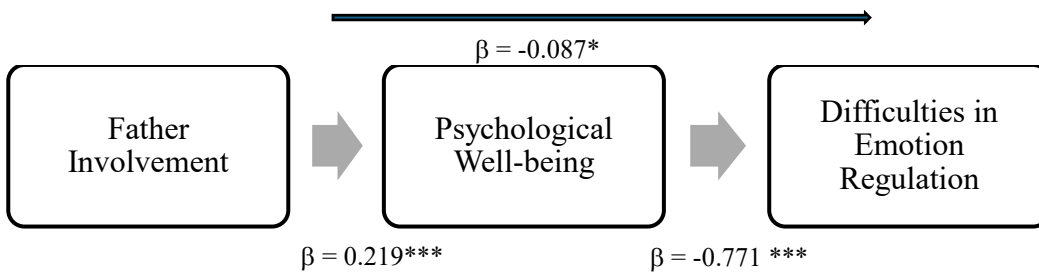


Figure 2. Mediation model of father involvement and difficulties in emotion regulation through psychological well-being. Standardized path coefficients (β) are shown

2.5 Discussion

Father Involvement and Emotion Regulation Difficulties

Consistent with prior research, father involvement was directly associated with lower difficulties in emotion regulation, albeit with a relatively modest effect size. This finding aligns with developmental theories that emphasize fathers' distinctive role in adolescents' emotional socialization, particularly through engagement in stimulating, autonomy-supportive, and emotionally challenging interactions [40]. Such interactions are believed to foster adolescents' tolerance for emotional arousal, impulse control, and regulatory flexibility—capacities that are especially salient during adolescence, a developmental period marked by heightened emotional reactivity and ongoing maturation of regulatory systems [18, 19].

The modest magnitude of the direct effect observed in this study is theoretically meaningful rather than problematic. Prior research indicate that paternal influences on adolescents' internal emotional processes are often indirect and embedded within broader relational and psychological systems [45]. Fathers may not always engage in explicit emotion coaching; instead, their influence may be conveyed through emotional availability, consistency, and relational security. For adolescent girls—who are at heightened risk for emotion regulation difficulties due to increased interpersonal

sensitivity and rumination tendencies even moderate levels of supportive father involvement may function as an important emotional stabilizer.

Father Involvement and Psychological Well-Being

A central finding of this study is the strong positive association between father involvement and adolescents' psychological well-being. This result is consistent with a growing body of evidence demonstrating that fathers contribute uniquely to adolescents' eudaimonic well-being, including self-acceptance, purpose in life, and positive relational functioning [30]. From the perspective of self-determination theory, involved fathers may satisfy adolescents' fundamental psychological needs for autonomy, competence, and relatedness—needs that are critical for psychological flourishing during adolescence [7].

Adolescence is a developmental stage characterized by identity exploration and increasing self-reflection, making psychological well-being a particularly salient outcome. Fathers who are emotionally engaged and responsive may reinforce adolescents' sense of personal value and agency, thereby supporting identity coherence and emotional stability. Longitudinal studies have shown that paternal warmth and involvement predict sustained increases in adolescents' life satisfaction and emotional balance [16]. The present findings extend this literature by demonstrating that these associations hold within a non-Western, matrilineal cultural context, underscoring the cross-cultural relevance of paternal engagement for adolescent well-being

Psychological Well-Being as a Predictor of Emotion Regulation

Psychological well-being emerged as a strong negative predictor of emotion regulation difficulties, supporting conceptualizations of well-being as a key intrapersonal resource that facilitates adaptive emotional functioning. Adolescents with higher well-being are more likely to demonstrate emotional clarity, goal-directed behavior under stress, and access to effective regulation strategies such as cognitive reappraisal and problem-solving [23, 26]. In contrast, diminished well-being has been consistently linked to emotional dysregulation, impulsivity, and reliance on maladaptive coping strategies [33].

These findings align with the broaden-and-build theory, which posits that positive psychological functioning broadens individuals' cognitive and behavioral repertoires, thereby enhancing resilience and regulatory flexibility [41]. Psychological well-being may reduce emotion regulation difficulties by strengthening attentional control, reducing emotional reactivity, and facilitating meaning-making processes that buffer stress. Recent reviews further confirm that well-being plays a central role in linking family relationships to adolescents' emotional adjustment across cultures..

The Mediating Role of Psychological Well-Being

The most theoretically significant contribution of this study lies in demonstrating that psychological well-being partially mediates the relationship between father involvement and emotion regulation difficulties. The stronger indirect effect suggests that father involvement influences adolescents' emotional functioning primarily by shaping internal psychological resources rather than solely through direct behavioral or supervisory mechanisms.

This finding is consistent with integrative developmental models proposing that parenting practices exert their influence on emotional outcomes through their impact on adolescents' self-

concept, emotional security, and sense of purpose [24]. Fathers who provide warmth, validation, and consistent engagement may foster psychological coherence and self-acceptance, which in turn enable adolescents to navigate emotional challenges more effectively. The partial nature of the mediation indicates that father involvement also exerts direct effects on emotion regulation, possibly through emotion modelling, stress buffering, or shaping family emotional climate. This highlights the multifaceted nature of paternal influence and suggests that future research should examine additional mediators, such as attachment security, emotion socialization practices, or perceived parental acceptance.

Cultural Significance: Minangkabau Context

The Minangkabau cultural context provides a critical lens through which these findings should be interpreted. As the world's largest matrilineal society, Minangkabau culture assigns lineage and inheritance through the maternal line, while fathers occupy a complex role centered on moral guidance, religious instruction, and emotional support [42]. Despite their structurally peripheral position within the matrilineal household, fathers remain psychologically salient figures in adolescents' lives.

The present findings suggest that, within this context, father involvement may carry heightened psychological significance, particularly for adolescents' well-being. Because paternal emotional engagement is not structurally mandated by the kinship system, its presence may be interpreted by adolescents as a strong signal of personal value and support. This interpretation may amplify the impact of father involvement on psychological well-being, which subsequently translates into better emotion regulation. Similar dynamics have been reported in other collectivistic or culturally hybrid societies, where deviations from traditional paternal roles are experienced as especially meaningful. By demonstrating these mechanisms in a matrilineal society, this study challenges assumptions that paternal influence is diminished in non-patriarchal family systems and contributes to a more culturally inclusive understanding of adolescent development.

Implications for Theory and Practice

Theoretically, this study advances the literature by integrating father involvement, psychological well-being, and emotion regulation into a single mediation model within a non-Western cultural framework. It underscores the importance of examining psychological well-being as a key mechanism linking family relationships to emotional outcomes and supports calls for greater cultural diversity in developmental research.

Practically, the findings highlight the value of family-based interventions that actively involve fathers and prioritize adolescents' psychological well-being. Programs aimed at improving adolescent emotional regulation may benefit from incorporating components that enhance paternal emotional engagement while simultaneously fostering adolescents' sense of meaning, self-acceptance, and relational security. In culturally diverse settings such as Indonesia, interventions should be culturally responsive, acknowledging local family structures while promoting adaptive father–daughter relationships.

Limitations and Future Directions

Several limitations should be acknowledged. The cross-sectional design precludes causal inference, and longitudinal studies are needed to clarify developmental pathways. Reliance on self-report

measures may introduce bias, suggesting the value of multi-informant and observational approaches in future research. Nevertheless, the findings should be interpreted within the context of female adolescents and may not be directly generalized to male adolescents. Future research should examine whether similar mediation pathways operate among boys or in mixed-gender samples.

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