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*Article*

# The Longitudinal Impact of Father Presence on Adolescent Depressive Symptoms: The Mediating Role of Emotion Beliefs and Emotion Regulation

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**Abstract**

Background: Adolescence is a developmental period marked by heightened vulnerability to depressive symptoms. Although prior research highlights the significance of father presence in adolescent mental health, longitudinal evidence clarifying both its direct and indirect effects remains scarce. Methods: The present study used a two-wave longitudinal design to examine whether emotion beliefs and emotion regulation processes explain the link between father presence and depressive symptoms. Participants included 1075 Chinese adolescents ($M_{age}$ = 16.06, $SD$ = 0.43, girls = 52.9%). Results: Path models showed that higher perceived father presence predicted lower depressive symptoms over time. Emotion beliefs and cognitive reappraisal each served as significant mediators in this association. Moreover, a sequential pathway emerged that father presence predicted fewer maladaptive emotion beliefs, which in turn promoted the use of cognitive reappraisal, ultimately reducing depressive symptoms. Conclusions: These findings shed light on the cognitive and regulatory processes through which paternal presence contributes to adolescent emotional adjustment and provide support for incorporating paternal emotional engagement and emotion socialization strategies into family-based prevention and intervention programs targeting adolescent depression.

**Keywords:** father presence; emotion beliefs; emotion regulation; adolescent depressive symptoms

## 1. Introduction

Adolescence is a pivotal developmental stage characterized by rapid biological, psychological, and social role transitions, during which vulnerability to depressive symptoms markedly (Rapee et al., 2019; Jiang et al., 2021). Globally, more than one-fifth of children and adolescents experience a depressive episode or display depressive symptoms (Mei & Wang, 2024), and the prevalence of these symptoms continues to rise during adolescence (Lu et al., 2024). Depression during adolescence is associated with impairments in academic functioning, interpersonal relationships, and social adjustment, and also increases the risk of self-injury and suicide, making it a pressing public health concern (Liu et al., 2025). From an ecological systems perspective, the family serves the core microsystem in which children's development unfolds. Parents' behaviors exert direct and enduring influences on children's psychological and social adjustment through daily interactions (Bronfenbrenner & Morris, 1998). Empirical evidence consistently indicates a strong association between family functioning and adolescents' depressive symptoms (Iwanski et al., 2021), perhaps because adolescents raised in warm and supportive family environments are more likely to develop

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adaptive emotion regulation strategies and greater psychological resilience (Vergara-Lopez et al., 2024).

In many cultural contexts, including China, caregiving responsibilities largely fall on mothers, while father absence or limited paternal involvement is relatively common (Kwete et al., 2024). Such patterns may pose potential risks to adolescents' mental health (Culpin et al., 2022; He et al., 2012). Although previous research has shown a significant negative relationship between father presence, defined as adolescents' perceptions of their fathers' emotional investment and psychological availability, and depressive symptoms among adolescents (Puglisi et al., 2024; Pruett et al., 2017), studies examining both the direct and indirect effects of father presence on adolescent depressive symptoms remain limited. Moreover, the underlying mediating mechanisms through which father presence influences adolescent depressive symptoms have yet to be elucidated, despite the fact that a growing body of literature underscores the pivotal role fathers play in adolescents' developmental and mental health trajectories (Puglisi et al., 2024; Culpin et al., 2013; Chang et al., 2007). Consequently, examining the association between paternal presence and depressive symptoms in adolescents, alongside the potential mediating mechanisms, is of both theoretical and practical significance. Within this theoretical framework, emotion beliefs and emotion regulation may serve as key mediating pathways linking father presence to adolescents' mental health. Emotion beliefs refer to an individual's perception of the controllability and functionality of emotional experiences (Tamir et al., 2007), whereas emotion regulation encompasses the processes through which individuals monitor, modify, and express emotions (Gross, 1998). Experimental and observational studies provide initial support showing that fathers' positive emotional involvement and socio-emotional behaviors shape youths' emotion beliefs and influence their use of adaptive emotion regulation strategies (Ford & Gross, 2019; Wang et al., 2019; Eisenberg et al., 1998). Yet, longitudinal research testing these mechanisms remains scarce.

To address these gaps, the present study employs a longitudinal design to examine the temporal associations between father presence and adolescent depressive symptoms and to test whether emotion beliefs and emotion regulation function as sequential mediators. A longitudinal approach allows for the examination of developmental change and provides insights into potential causal pathways. Findings from this study are expected to advance theoretical understanding of father–child emotional dynamics and contribute to evidence-based family interventions that promote healthy fathering practices. More broadly, this work may inform family-centered mental health promotion models aimed at preventing depression during adolescence.

### *1.1. The Relationship Between Father Presence and Depressive Symptoms*

The theory of father presence (Krampe & Newton, 2006) offers a multifaceted explanation of children's perceptions of paternal affection, including father-son relationships, intergenerational family dynamics, and children's belief systems about the role of the father. This theory posits that paternal presence is expressed in the psychological experience of children in relation to their father, rather than in his physical presence or objective existence. Empirical research indicates that higher perceived paternal presence is linked to more positive emotional experiences, stronger self-esteem, and better overall psychological adjustment among children and adolescents (Puglisi et al., 2024; Pruett et al., 2017). Puglisi et al. (2024), for instance, conducted a systematic review and found that active father involvement in childrearing during early childhood is conducive to the promotion of children's social competence, emotional regulation, and secure attachment, thereby establishing the foundations for future psychological well-being. Conversely, extended periods of paternal absence, neglectful parenting, or emotional disengagement have been linked to emotional disturbances in adolescents, behavioral problems, and social adjustment difficulties (Cong et al., 2021; Culpin, 2013). These patterns may disrupt the emotional support system within the family and weaken a child's sense of security and efficacy, leaving them more vulnerable to depressive experiences.

Findings across cultural contexts further support the protective role of fathers. For instance, Chang et al. (2007) reported that even in families where mothers were at high risk of depression,

 doi:10.20944/preprints202511.1368.v1



active father involvement remained significantly associated with fewer behavioral problems in children, confirming the importance of the father's role beyond the influence of the mother. Similarly, Wei et al. (2023) observed that the presence of the father contributes to the psychological security and emotional stability of children, thereby enhancing their capacity to cope with stress and emotional challenges. Together, these findings imply that father presence contributes not only to family functioning but also to children's psychological resilience. Based on this body of work, we expect that higher perceived father presence will predict fewer depressive symptoms over time.

### *1.2. The Mediating Role of Emotion Beliefs*

Emotion beliefs refer to an individual's cognitive assessment of emotional flexibility, specifically their perception of the possibility of changing, managing, and controlling emotions (Tamir et al., 2007). Emotion beliefs are typically comprised of two fundamental dimensions (Becerra et al., 2020). The first is the belief in the controllability of emotions, which reflects the extent to which an individual perceives emotions as modifiable and changeable. The second is beneficial emotion beliefs, which relate to an individual's assessment of the functional value of emotions. Recent research has shown that adolescents who view emotions as controllable and meaningful tend to report higher psychological well-being and fewer depressive symptoms (Ford & Gross, 2019; Somerville et al., 2024). Conversely, beliefs that emotions are fixed or pointless make it less likely that individuals will use effective regulatory strategies, such as cognitive reappraisal, to manage emotional experiences, which increases the risk of depressive symptoms and poor psychological functioning (Kim et al., 2024; Kneeland & Simpson, 2022; Ford & Gross, 2019; Ford & Gross, 2018; Kneeland et al., 2016).

Adolescence represents a critical developmental stage for the formation of emotion beliefs, during which the presence of maladaptive beliefs has been identified as a risk factor for the onset and persistence of depressive symptoms (Ford et al., 2018). During this stage, the family environment plays a central role in shaping adolescents' emotion beliefs through processes such as observation, emotional social communication, and direct guidance on expressing and regulating emotions (Lozada et al., 2016). Parents, in particular, influence how children interpret and evaluate emotional experiences. Existing work suggests that parental emotion socialization practices contribute to adolescents' emotion beliefs, which are closely tied to emotion regulation strategies and later mental health outcomes (Peter et al., 2025; Guo et al., 2024).

While both parents contribute to emotional development, the role of fathers has received growing attention. Fathers who are engaged, responsive, and emotionally available have been found to support children's social development and emotional confidence ( Choi et al., 2021; Cabrera et al., 2018). Building on this work, the role of paternal presence in shaping adolescents' psychological adjustment is noteworthy. Research indicates that father presence may foster positive emotion beliefs, contributing to a more adaptive understanding of emotional experiences (Chiang et al., 2024). These adaptive emotion beliefs subsequently encourage the use of effective emotion regulation strategies when faced with stress, reducing the accumulation of negative emotions and depressive symptoms (Ford & Gross, 2019). Building on this reasoning, the present study proposes that emotion beliefs will mediate the relationship between father presence and depressive symptoms in adolescents.

### *1.3. The Mediating Role of Emotion Regulation Strategies*

Emotion regulation is the capacity to monitor, evaluate, and modify one's emotional experiences and expressions across various contexts, representing a crucial internal resource for psychological well-being (Gross, 1998). A substantial body of evidence indicates that individual differences in emotion regulation are closely linked to internalizing difficulties, including depressive symptoms. Specifically, maladaptive strategies such as expressive suppression tend to correlate with elevated depressive symptoms, whereas adaptive approaches, like cognitive reappraisal, are associated with lower levels of depressive symptoms (Schäfer et al., 2017; Ford et al., 2018; Iwanski et al., 2021).

 doi:10.20944/preprints202511.1368.v1



Parents are widely acknowledged as the main agents of socialization, playing a central role in the development of children's emotion regulation (Morris et al., 2007; Eisenberg et al., 1998). The tripartite model proposed by Morris and colleagues (2007) suggests that parents shape children's emotion regulation through three key pathways: children's observation of parental regulation strategies, emotion-related parenting practices, and the overall emotional climate of the family. Increasing attention has been given to the specific role of fathers in this process. Studies indicate that fathers' approaches to emotion socialization are particularly important for adolescents' development of emotion regulation strategies. Adolescents whose fathers respond to negative emotions with acceptance and guidance rather than with suppression or neglect are more likely to develop adaptive strategies such as cognitive reappraisal, which in turn lowers their risk of depressive symptoms (Wang et al., 2019; Eisenberg et al., 1998). Active involvement and emotional support from fathers not only directly enhance adolescents' emotion regulation abilities (Puglisi et al., 2024) but also indirectly reduce the risk of depression by fostering adolescents' self-efficacy and secure attachment (Diniz et al., 2021). Moreover, secure father–child attachment has been shown to alleviate depressive symptoms through improvements in emotion regulation, further emphasizing the mediating role of emotion regulation in this relationship (Iwanski et al., 2021). Overall, adolescents' emotion regulation serves both as a direct outcome of parental emotion socialization and as a key psychological pathway linking paternal involvement to adolescent mental health. Therefore, the present study hypothesizes that emotion regulation will mediate the relationship between father presence and adolescent depressive symptoms.

### *1.4. Chain Mediation of Emotion Beliefs and Emotion Regulation Strategies*

Emotion beliefs not only reflect individuals' metacognitive understanding of emotions but also shape their selection of regulation strategies during emotional experiences (Ford & Gross, 2019). Kneeland et al. (2016) argued that the regulatory motivation derived from the belief that "emotions are relatively controllable" can be particularly effective when individuals manage emotional experiences in social contexts by using targeted regulation strategies. Adolescents who view emotions as controllable are more likely to adopt adaptive strategies, such as cognitive reappraisal, which have been linked to lower levels of anxiety and depression (Somerville et al., 2024; Ford & Gross, 2019).

According to Gross's (2015) process model of emotion regulation, regulating emotions involves multiple steps: recognizing the need to regulate, choosing suitable strategies, applying them, and evaluating their effectiveness. A person's beliefs about what emotions are, how controllable they are, and their functions shape their motivation and decisions at each step, influencing both the effectiveness of regulation and long-term mental health outcomes (Becerra et al., 2020; Ford & Gross, 2019; Gross, 2015). Subsequent research has demonstrated that emotion beliefs not only determine whether individuals are willing to engage in emotion regulation, but also influence their choice of strategies and the flexibility and effectiveness of applying these strategies (Ford & Gross, 2019; Somerville et al., 2024). For example, individuals who perceive emotions as mutable are more inclined to employ proactive strategies such as cognitive reappraisal, while those who regard emotions as uncontrollable tend to resort to the suppression of emotional expression (Peter et al., 2025). Furthermore, research has identified a significant relationship between enhanced adaptive regulation strategies and reduced depressive symptoms (Iwanski et al., 2021; Guo et al., 2024), suggesting that adaptive emotion beliefs may indirectly mitigate depressive tendencies by facilitating more effective regulatory processes. Therefore, emotion beliefs may influence depressive symptoms in adolescents by impacting their choice and use of emotion regulation strategies. Therefore, the present study proposes that emotion beliefs and emotion regulation strategies will act as chain mediators in the relationship between father presence and adolescent depressive symptoms.

 doi:10.20944/preprints202511.1368.v1



### *1.5. The Current Study*

In recent years, the role of fathers in shaping adolescents' mental health has gained increased attention. While much of the earlier research focused primarily on the role of mothers, a growing body of work now highlights the distinct and essential role fathers play in providing emotional support and facilitating socialization during adolescence. This is critical for the development of emotional regulation, self-concept, and overall mental health (Puglisi et al., 2024; Wei et al., 2013; Chang et al., 2007). Given these findings, exploring the underlying mechanisms through which paternal presence prevents psychological maladjustment in adolescents has both important theoretical and practical implications. Empirical research consistently demonstrates that higher levels of perceived paternal presence are inversely associated with depressive symptoms in adolescents (Jiang et al., 2024; Culpin et al., 2022; Culpin et al., 2013). However, longitudinal studies examining the lasting impact of paternal presence on depressive symptoms in adolescents remain relatively rare. Moreover, the mediating processes through which paternal presence exerts its influence, and the way in which these processes interact dynamically over time, have yet to be clarified. Addressing these gaps is essential for advancing our understanding of how paternal presence affects adolescents' emotional development and mental health.

The present study focuses on two mediating mechanisms that are theoretically grounded and may collectively explain the longitudinal relationship between paternal presence and depressive symptoms in adolescents. These mechanisms are emotion beliefs and emotion regulation strategies. Specifically, drawing on cognitive appraisal theory and emotional socialization theory, the present model aims to examine whether affective beliefs and emotion regulation strategies exert independent and sequential effects over time, thereby mediating the effect of paternal presence on depressive symptoms in adolescents. The hypotheses of the current study are proposed as follows: father presence would negatively predict adolescents' depressive symptoms (Hypothesis 1). Adolescents' emotion beliefs and emotion regulation strategies would independently mediate the longitudinal relationship between father presence and depressive symptoms (Hypothesis 2). Finally, adolescents' emotion beliefs and emotion regulation strategies would act as chain mediators in the association between father presence and depressive symptoms (Hypothesis 3).

## 2. Materials and Methods

### *2.1. Participants and Procedure*

This study utilized data from three waves of the Family and Child Development Project (FCDP), which involved participants from two high schools located in Shandong Province, China. Data were gathered through paper-based questionnaires administered in classrooms by trained research assistants. A total of 1,075 high school students participated in the study, with data collected at three time points: June 2024 (T1), December 2024 (T2), and June 2025 (T3). At T1, the average age of the participants was 16.06 years (*SD* = 0.43), with 47.1% identifying as male and 52.9% as female. In addition to the primary variables of interest, demographic information was also collected, including participants' age, gender (0 = *male*, 1 = *female*, 2 = *other*), parental education level (1 = *elementary school or below*, 2 = *middle school*, 3 = *high school or vocational training*, 4 = *undergraduate degree*, 5 = *graduate degree or higher*), and family income (1 = *1,000 RMB and below*; 2 = *1,001 – 3,000 RMB*; 3 = *3,001 – 5,000 RMB*; 4 = *5,000 – 10,000 RMB*; 5 = *10,001 – 20,000 RMB*; 6 = *20,000 RMB and above*). Both adolescent participants and their parents provided written informed consent, and participants received compensation for their involvement at the conclusion of the study. The study procedures and assessments were approved by the Ethics Committee of the University, with IRB approval number IRB#202409067b.

 doi:10.20944/preprints202511.1368.v1



### 2.2. Measures

#### 2.2.1. Father Presence

At T1, adolescents completed the 31-item Chinese version of the Father Presence Questionnaire-Short Form, which was originally developed by Krampe et al. (2006), later revised by Barrocas et al. (2017), and validated for Chinese adolescents by Li et al. (2019). This scale composes three subscales, including *relationship with the father* (e.g., "I felt my father was behind me and supported my choices or activities"), *beliefs about the father* (e.g., "Fathers affect their sons' and daughters' moral values or behavior"), and *intergenerational family influences* (e.g., "My father felt warm and safe when he was with his father"). Respondents rated items on a 5-point Likert scale (1 = *never*, 2 = *seldom*, 3 = *occasionally*, 4 = *frequently*, 5 = *always*). Higher scores on the average item ratings indicated greater perceived father presence. The scale showed excellent reliability in this study ($\alpha$ = .93).

#### 2.2.2. Emotion Beliefs

At T2, each adolescent responded to the 16-item Emotion Beliefs Questionnaire (Becerra et al., 2020). This scale assesses two key dimensions of emotion beliefs, including *beliefs about the controllability of emotions* and *beliefs about the usefulness of emotions*. These beliefs are assessed for negative emotions (e.g., sadness) and positive emotions (e.g., happiness). Sample items include "Once people are experiencing negative emotions, there is nothing they can do about modifying them" and "There is very little use for positive emotions." Responses were rated on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). Higher scores on the average ratings reflect more maladaptive beliefs, indicating stronger perceptions of emotions as uncontrollable and unhelpful. The scale demonstrated high reliability in this study ($\alpha$ = .94).

#### 2.2.3. Emotion Regulation

At T2, participants completed the 10-item Emotion Regulation Questionnaire (ERQ; Gross & John, 2003), which measures adolescents' use of *cognitive reappraisal* (e.g., "Fathers affect their sons' and daughters' moral values or behavior") and *expressive suppression* (e.g., "Fathers affect their sons' and daughters' moral values or behavior") in their attempts to regulate emotions. All items were rated on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). The Chinese version of this scale has previously been shown to be reliable (Wang et al., 2007; Guo et al., 2023). In the present study, the scale demonstrated a reliability of .92 for the cognitive reappraisal subscale, and .77 for the expressive suppression subscale.

#### 2.2.4. Depressive Symptoms

At T3, each adolescent responded to the short form of the Center for Epidemiologic Studies Depression Scale (CES-D; Andresen et al., 1994). Sample items include "I had trouble keeping my mind on what I was doing" and "I felt I could not shake off the blues even with help from my family and friends." They rated their responses using a 4-point scale (1 = *rarely*; 4 = *most or all of the time*). Scores were averaged, with higher scores indicating greater depressive symptom severity in the past week. The reliability and validity of the Chinese version of the CES-D scale have been supported in prior research (Cao et al., 2024). This scale demonstrated good reliability in the current study ($\alpha$ = .84).

#### 2.2.5. Covariates

Family income, parent education, as well as adolescent age and gender were used as covariates in the analyses.

 doi:10.20944/preprints202511.1368.v1



*2.3. Analysis Plan*

Descriptive statistics were first calculated to explore the distribution of all study variables, including measures of central tendency (means), variability (standard deviations), and normality (skewness and kurtosis). Bivariate correlations were then computed to examine the relationships among the covariates and key study variables. Next, path analysis was conducted in lavaan (Rosseel, 2012) using R (R Core Team, 2020) to test the proposed chain mediation model, which posits that father presence influences adolescent depressive symptoms through a sequential process involving emotion beliefs and emotion regulation strategies (specifically, reappraisal and suppression). The analysis proceeded in the following two steps. First, a direct effects model (Model A) was tested, where adolescent depressive symptoms was regressed onto father presence without including any mediators. Second, the full mediation model (Model B) was tested, which included the sequential mediators of emotion beliefs and emotion regulation strategies.

The significance of both the direct and indirect effects was assessed using maximum likelihood estimation with bias-corrected bootstrapping, with a 95% confidence interval calculated from 10,000 resamples. Given the sensitivity of chi-square index to sample size (Kline, 2023), model fit was evaluated based on values of comparative fit index (CFI > .90), root mean square error of approximation (RMSEA < .08), and standardized root mean square residual (SRMR < .08; Hu & Bentler, 1999).

## 3. Results

*3.1. Descriptive Analyses*

Table 1 presents the means, standard deviations, and correlation matrix of study variables. Bivariate correlations revealed significant associations between the key variables. Specifically, father presence at T1 was negatively associated with adolescent depressive symptoms at T3 ($r = -.20$, $p < .001$), negatively related to T2 emotion beliefs ($r = -.22$, $p < .001$), positively related to T2 cognitive reappraisal ($r = .15$, $p < .001$), and negatively associated with T2 expressive suppression ($r = -.10$, $p = .003$). T2 emotion beliefs were positively related to depressive symptoms at T3 ($r = .39$, $p < .001$), negatively related to T2 cognitive reappraisal ($r = -.35$, $p < .001$), and positively associated with T2 expressive suppression ($r = .19$, $p < .001$). T2 cognitive reappraisal was positively related to T2 expressive suppression ($r = .17$, $p < .001$) and negatively related to depressive symptoms at T3 ($r = -.28$, $p < .001$). Finally, T2 expressive suppression was positively associated with depressive symptoms at T3 ($r = .10$, $p = .007$). For covariates, family income, maternal and paternal education, and adolescent age and sex were associated with at least one key study variable, and were therefore retained as covariates in the path models (see Table 1 for details).

**Table 1.** Means, Standard Deviations, and Correlations of Study Variables.

| Variables | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Key variables | | | | | | | | | | | | |
| 1. Father presence T1 | 3.52 | 0.67 | – | | | | | | | | | |
| 2. Emotion beliefs T2 | 2.26 | 1.04 | -.23** | – | | | | | | | | |
| 3. Cognitive reappraisal T2 | 4.96 | 1.28 | .15** | -.35** | – | | | | | | | |
| 4. Expressive suppression T2 | 3.64 | 1.30 | -.10** | .19** | .17** | – | | | | | | |
| 5. Depressive symptoms T3 | 1.95 | 0.54 | -.20** | .39** | -.28** | .10** | – | | | | | |
| Covariates | | | | | | | | | | | | |
| 6. Family income | 3.03 | 1.09 | .11** | -.01 | .04 | -.04 | -.08* | – | | | | |
| 7. Mom education | 1.87 | 0.93 | .10** | .004 | .05 | -.05 | -.08* | .27** | – | | | |

 doi:10.20944/preprints202511.1368.v1



| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8. Dad education | 1.97 | 0.89 | .15** | .01 | .03 | .01 | -.08* | .26** | .61** | – | | |
| 9. Age | 16.06 | 0.43 | -.01 | .02 | -.02 | -.04 | .03 | -.07* | -.02 | -.06 | – | |
| 10. Gender | | | -.14 | -.01 | -.01 | -.07* | -.05 | .01 | .06 | .04 | -.05 | – |

*Note.* T1 = wave one, T2 = wave two, T3 = wave three. $^{*}p < .05$. $^{**}p < .01$.

### *3.2. Primary Analyses*

Table 2 provides the standardized estimates of all path coefficients for both the direct and indirect paths in Model A and Model B. First, Model A examined the predictive role of father presence at T1 on depressive symptoms at T3. The results indicated that higher levels of T1 father presence negatively predicted adolescent depressive symptoms at T3 (β = -.20, p < .001, 95% CI [-.26, -.13]). Then, Model B considered the mediating effect of both emotion beliefs and emotion regulation (cognitive reappraisal and expressive suppression; see Figure 1). The model showed good fit to data, RMSEA = 0.018 [0.000, 0.036], CFI = 0.987, and SRMR = 0.017. The findings indicated that greater father presence at T1 predicted fewer maladaptive emotion beliefs at T2 (β = -.22, p < .001, 95% CI [-.28, -.16]), higher levels of cognitive reappraisal at T2 (β = .07, p = .024, 95% CI [.01, .13]), and fewer depressive symptoms at T3 (β = -.09, p = .012, 95% CI [-.15, -.02]). Additionally, more maladaptive emotion beliefs at T2 were negatively associated with T2 cognitive reappraisal (β = -.33, p < .001, 95% CI [-.39, -.27]), positively related to T2 expressive suppression (β = .18, p < .001, 95% CI [.11, .24]), and predicted more depressive symptoms at T3 (β = .29, p < .001, 95% CI [.22, .36]). Finally, T2 cognitive reappraisal predicted fewer depressive symptoms at T3 (β = -.17, p < .001, 95% CI [-.24, -.10]). The paths from T1 father presence to T2 expressive suppression and from T2 expressive suppression to T3 depressive symptoms were not significant.

Table 2 also displays the coefficients for the indirect paths in Model B. Specifically, the indirect paths from father presence to depressive symptoms were significant via emotion beliefs (β = -.07, p < .001, 95% CI [-.09, -.04]) and via cognitive reappraisal (β = -.01, p = .043, 95% CI [-.02, -.00]) independently. Additionally, father presence was associated with fewer depressive symptoms through a serial mediation, with emotion beliefs leading to cognitive reappraisal (β = -.01, p < .001, 95% CI [-.02, -.01]).

**Table 2.** Standardized Bootstrap Estimates and 95% Bias-corrected CI for Direct and Indirect Effects in Path Models.

| | **Model A** | | | **Model B** | | |
|---|---|---|---|---|---|---|
| | | **95% CI** | | | **95% CI** | |
| **Effect** | **β** | **LL** | **UL** | **β** | **LL** | **UL** |
| Direct | | | | | | |
| Father presence T1 → Depressive symptoms T3 | -0.20*** | -.26 | -.13 | -.09* | -.044 | .037 |
| Indirect | | | | | | |
| Father presence T1 → Emotion beliefs T2 → Depressive symptoms T3 | | | | -.07*** | -.089 | -.041 |
| Father presence T1 → Cognitive reappraisal T2 → Depressive symptoms T3 | | | | -.01* | -.024 | .000 |
| Father presence T1 → Expressive suppression T2 → Depressive symptoms T3 | | | | -.004 | -.009 | .002 |
| Father presence T1 → Emotion beliefs T2 → Cognitive reappraisal T2 → Depressive symptoms T3 | | | | -.01*** | -.019 | -.006 |
| Father presence T1 → Emotion beliefs T2 → Expressive suppression T2 → Depressive symptoms T3 | | | | -.002 | -.005 | .001 |

*Note.* Standardized parameter estimates and 95% confidence intervals were presented. CI = confidence interval, LL = lower limit, UL = upper limit, T1 = wave one, T2 = wave two, T2 = wave three. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

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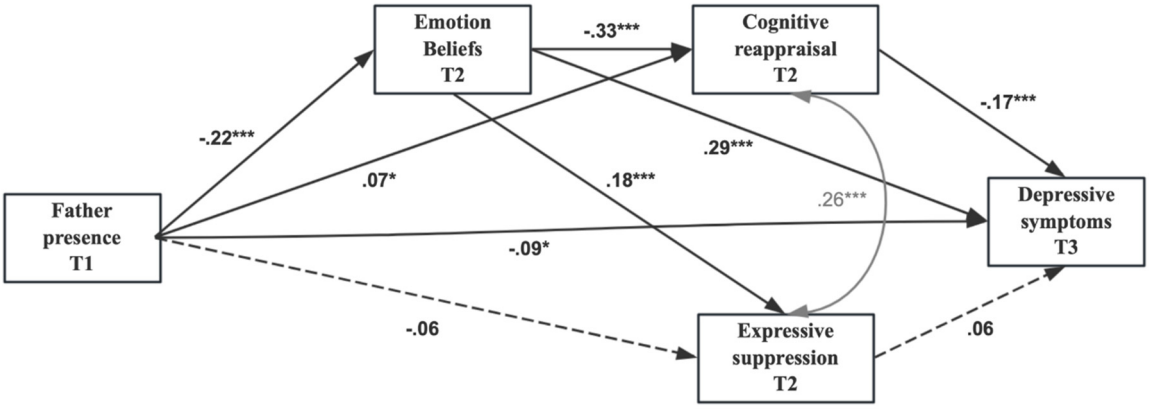


**Figure 1.** Path Model of the Relations between Father Presence, Emotion beliefs, Cognitive Reappraisal, Expressive Suppression, and Depressive Symptoms (Model B). *Note.* Standardized coefficients were presented. The paths of covariates were hidden for visual clarity. The dotted line indicates that the path coefficient is nonsignificant. T1 = wave one, T2 = wave two, SCC = self-concept clarity. $^{*}p < .05$. $^{***}p < .001$.

## 4. Discussion

An increasing body of research has established that father presence is negatively correlated with adolescent depressive symptoms. However, longitudinal studies examining both the direct and indirect effects of father presence on depression remain limited. To the best of our knowledge, this study is the first to employ a longitudinal design to explore the mediating roles of emotion beliefs and emotion regulation strategies in the relationship between father presence and adolescent depressive symptoms. Our findings demonstrate that father presence influences depressive symptoms directly, as well as indirectly through emotion beliefs alone and cognitive reappraisal alone, as well as via the sequential mediation of emotion beliefs and cognitive reappraisal. These results deepen our understanding of the mechanisms linking father presence to depressive symptoms, and offer valuable theoretical insights for interventions aimed at preventing depression during adolescence.

### *4.1. The Influence of Father Presence on Depressive Symptoms*

Our study confirmed Hypothesis 1, revealing that father presence was negatively associated with adolescent depressive symptoms. Specifically, adolescents who perceived their fathers as emotionally invested and psychologically available reported lower depressive symptoms over time. This longitudinal finding provides evidence for the protective role of father presence against depressive symptoms, reinforcing the conclusions drawn from previous cross-sectional research (Puglisi et al., 2024; Pruett et al., 2017). According to the theory of father presence (Krampe & Newton, 2006), paternal presence encompasses not only physical proximity but also emotional investment and psychological availability. This emotional presence provides adolescents with the necessary security, sense of belonging, and emotional support, reducing their risk of developing internalizing problems (Cong et al., 2021; Li & Tian, 2018; Culpin, 2013). Collectively, these findings highlight the foundational role of father presence in adolescents' psychological development and provide a basis for future family-based interventions that aimed at enhancing paternal involvement and promoting adolescent mental health.

### *4.2. The Mediating Role of Emotion Beliefs*

The findings demonstrated that emotion beliefs served as a significant mediator in the association between father presence and adolescents' depressive symptoms. Specifically, father presence predicted fewer maladaptive emotion beliefs in adolescents, which in turn contributed to

 doi:10.20944/preprints202511.1368.v1



lower subsequent levels of depressive symptoms. This model suggests that the presence of the father reduces the risk of adolescents developing depressive symptoms by promoting more adaptive emotion beliefs, namely that emotions are understandable, controllable, and have functional value. These findings are consistent with the triadic model of emotions (Morris et al., 2007), which emphasizes the role of parents, particularly fathers, in regulating adolescents' emotions. Fathers influence not only the direct emotional responses of adolescents but also their beliefs about the controllability of emotions, shaping their motivation to regulate emotions effectively (Ford & Gross, 2019). Within this theoretical framework, parents' active emotional communication, sensitivity, and responsive interactions play a crucial role in promoting adolescents' social and emotional competencies (Ford & Gross, 2019). Through active emotional communication, sensitivity, and responsiveness, fathers help adolescents develop a belief system that views emotions as controllable and functional. Such beliefs enable adolescents to better manage negative affect, effectively cope with stress, and, ultimately, exhibit fewer depressive symptoms (Somerville et al., 2024; Ford & Gross, 2019). Collectively, these findings provided support for Hypothesis 2, indicating that father presence indirectly alleviated adolescents' depressive symptoms by promoting adaptive emotion beliefs.

### *4.3. The Mediating Role of Emotion Regulation*

The findings revealed that father presence positively predicted adolescents' use of cognitive reappraisal strategies, which in turn negatively predicted depressive symptoms. However, the mediating effect of expressive suppression was not significant. These results suggest that father presence may buffer adolescents against depressive symptoms particularly through enhancing their use of adaptive emotion regulation strategies, that is cognitive reappraisal. Parental involvement often manifests as emotional support and guidance, which helps adolescents develop more flexible and adaptive strategies for managing negative emotions (Puglisi et al., 2024). Research indicates that active paternal involvement enhances adolescents' ability to utilize cognitive reappraisal to process negative emotional states (Wang et al., 2019; Morris et al., 2007; Eisenberg et al., 1998). Furthermore, the unique function of father-child interactions, which often involves motivation and challenge, provides opportunities for adolescents to practice problem-solving, derive meaning from emotional experiences, and regulate their emotions (Robinson et al., 2021). These experiential interactions directly contribute to the development of cognitive reappraisal, which ultimately reduce the risk of depressive symptoms.

Our finding that expressive suppression did not mediate the relationship between father presence and depressive symptoms can be understood within the cultural context of East Asia. In cultures that emphasize interpersonal harmony, such as in China, individuals are often encouraged to internalize emotional self-control and suppress personal feelings to maintain relational cohesion (Tsai et al., 2021). For Chinese adolescents, suppressing emotions may be seen as more socially acceptable than expressing or disclosing emotional struggles (Deng et al., 2017). Thus, the relationship between emotional expression suppression and depressive symptoms may be more context-dependent and vary across cultures (Tsai et al., 2021; Butler et al., 2007). This finding highlights the importance of considering cultural nuances when evaluating the effectiveness of emotion regulation strategies. Therefore, while cognitive reappraisal proved to be a key mediator, expressive suppression may have limited adaptability in promoting emotional well-being.

### *4.4. The Sequential Mediating Role of Emotion Beliefs and Emotion Regulation*

Our results also supported Hypothesis 3, showing that emotion beliefs and cognitive reappraisal jointly acted as sequential mediators in the longitudinal relationship between father presence and adolescent depressive symptoms. Specifically, father presence reduced adolescents' beliefs that emotions are uncontrollable and useless, which in turn facilitated their use of cognitive reappraisal, ultimately decreasing depressive symptoms. Theoretically, this finding integrates the emotion socialization framework (Eisenberg et al., 1998) with the emotion regulation process model (Gross, 2015), proposing that fathers influence adolescent mental health by altering core emotion beliefs.

 doi:10.20944/preprints202511.1368.v1



Through modeling, responsiveness, and communication, fathers help adolescents develop the ability to see emotions as manageable, thus enabling them to employ cognitive reappraisal in stressful situations (Ford & Gross, 2019). This process reduces the accumulation of negative affect and mitigates the risk of depression. Meta-analytic evidence further supports this idea, showing that cognitive reappraisal is associated with better psychological well-being and lower levels of depressive and anxiety symptoms (Webb et al., 2012). This sequential pathway reveals the underlying cognitive and emotional mechanisms through which father presence influences depressive symptoms, offering a new perspective on the unique role of fathers in adolescent emotional socialization.

From a developmental psychology perspective, these findings highlight a dynamic process through which emotion beliefs shape regulation strategies, ultimately influencing emotional outcomes. Father presence enhances adolescents' adaptive beliefs about emotions, leading to more effective use of cognitive reappraisal. This proactive regulation helps interrupt the buildup of negative emotions and lowers the risk of depression. These results provide support for Hypothesis 3, offering a valuable cognitive–emotional model for understanding family-based emotional socialization processes. Moreover, this model provides important implications for designing family interventions aimed at improving father involvement and promoting adolescent mental health.

### *4.5. Implications and Limitations*

The findings of this study have meaningful theoretical and applied implications. In many Asian families, fathers often assume the role of financial provider, whereas mothers are commonly responsible for daily caregiving and emotional communication (Kwete et al., 2024). This division of roles may contribute to reduced paternal involvement in emotional socialization, limiting adolescents' opportunities to receive emotional support or guidance from their fathers. Prior longitudinal research has shown that father absence during childhood is associated with elevated trajectories of depressive symptoms throughout adolescence and into adulthood (Culpin et al., 2022). Building on this work, the present study demonstrates that even within sociocultural contexts where paternal involvement is relatively constrained, adolescents' subjective perceptions of their fathers' emotional availability and psychological presence meaningfully predict their mental health through cognitive and emotional pathways. These findings suggest that family-based interventions should extend beyond merely increasing paternal physical presence. Instead, enhancing fathers' emotional responsiveness and psychological accessibility may have greater impact on adolescents' emotional development and well-being. Strengthening adolescents' perception of paternal emotional support may foster healthier emotion socialization processes, ultimately reducing depressive risk.

Despite its contributions, this study has several limitations. First, although a three-wave longitudinal design was used, the dynamic interplay among variables was not examined in depth. Future research may adopt cross-lagged panel modeling or latent growth modeling to more rigorously examine causal directions and developmental trajectories. Second, all measures relied on adolescent self-report, which may introduce response bias. Future studies may incorporate multiple informants, behavioral observations, or physiological measures to improve methodological rigor. Finally, because the sample consisted solely of Chinese adolescents, the generalizability of the findings should be tested in other cultural contexts. Given evidence that paternal involvement during early childhood may exert long-term influence on developmental outcomes, future research may also explore whether the implications of father presence differ at various developmental stages. Cross-cultural comparative research would help distinguish universal patterns of paternal influence from those driven by specific cultural values or parenting norms.

## 5. Conclusions

Using a three-wave longitudinal design, this study examined how father presence relates to adolescent depressive symptoms over time, and whether emotion beliefs and emotion regulation mediate this association. The findings indicate that both emotion beliefs and cognitive reappraisal

 doi:10.20944/preprints202511.1368.v1



operate as independent mediators and as sequential mediators linking father presence to lower depressive symptoms. Specifically, greater father presence predicted fewer maladaptive beliefs about emotions being uncontrollable or useless, which in turn supported adolescents' use of cognitive reappraisal, ultimately reducing depressive symptoms.

These findings extend the theoretical foundation of father presence by identifying cognitive and emotional mechanisms through which paternal involvement affects adolescent mental health. From a practical perspective, the results highlight the importance of strengthening fathers' emotional engagement within family-based mental health interventions. By fostering adaptive emotion beliefs and effective emotion regulation strategies, fathers may play a meaningful role in supporting adolescents' psychological well-being. Future research should continue to test this sequential mediation model across diverse cultural and developmental contexts to better understand how cultural norms, timing of paternal involvement, and broader ecological influences shape these processes. Such work will enhance our understanding of adolescent emotional development and inform more culturally responsive and developmentally attuned intervention approaches.

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