

## Research Article

# Maternal History of Adverse Childhood Experiences and Subsequent Infant Paternal Involvement

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## Abstract

This study explores the impact of maternal Adverse Childhood Experiences (ACEs) on paternal involvement in their infants' lives. Maternal ACEs encompass various forms of abuse, neglect, and household dysfunction experienced during childhood. Understanding this relationship is crucial for informing interventions and policies aimed at improving family dynamics and child development. The sample consisted of 70 women with documented histories of ACEs, currently in co-parenting relationships with the fathers of their infants. Data were collected through the ACE Questionnaire, Paternal Involvement Scale, semi-structured interviews, and observational studies of father-infant interactions. Descriptive statistics revealed mean scores of 4.5 for ACEs and 6.8 for paternal involvement. A significant negative correlation ( $r = -0.45, p = 0.001$ ) was found between maternal ACE scores and paternal involvement. Regression analysis identified emotional abuse ( $\beta = -0.35, p = 0.005$ ) and household dysfunction ( $\beta = -0.28, p = 0.007$ ) as significant predictors of reduced paternal involvement. Qualitative data from interviews highlighted themes of emotional unavailability, increased parenting stress, and a need for additional support among mothers with high ACE scores. These findings suggest that maternal ACEs significantly affect paternal involvement, necessitating interventions focused on emotional support, stress reduction, and community support to improve family outcomes. This study underscores the importance of addressing childhood adversity in mothers to foster healthier family dynamics and enhance paternal engagement in infant care.

**Keywords:** Maternal adverse childhood experiences; Paternal involvement; Child development; Family dynamics; Emotional support; Parenting stress

## Introduction

Adverse Childhood Experiences (ACEs) are potentially traumatic events that occur in childhood (0-17 years) and include experiences such as abuse, neglect, and household dysfunction. These early experiences are critical as they can have long-lasting effects on health and well-being across the lifespan. The term "ACEs" encompasses a wide range of harmful experiences [1], including physical, emotional, and sexual abuse, physical and emotional neglect, and household challenges such as domestic violence, substance abuse, mental illness, parental separation, and incarceration of a household member. Extensive research has demonstrated that ACEs are linked to a myriad of negative outcomes, including chronic health conditions, mental illness, substance use problems, and lower life expectancy. However, there is a growing interest in understanding how ACEs impact interpersonal relationships and parenting behaviors in adulthood [2]. This study specifically investigates the impact of maternal ACEs on paternal involvement in their infants' lives. Paternal involvement is critical for child development and has been associated with numerous

positive outcomes, including better cognitive development, emotional well-being, and social competence in children [3]. However, paternal involvement can be influenced by various factors, including the father's own childhood experiences, socio-economic status, and the quality of the relationship between parents. Importantly, maternal experiences and well-being also play a significant role in shaping paternal involvement [4]. Women who have experienced ACEs may carry forward the impact of these early adversities into their adult relationships and parenting practices. These women are at a higher risk for mental health issues such as depression and anxiety, which can affect their interactions with their partners and their children. Furthermore, the stress and trauma associated with ACEs may influence their ability to form and maintain healthy relationships, including co-parenting relationships. As such, understanding how maternal ACEs affect paternal involvement is crucial for developing targeted interventions that can support both parents and improve outcomes for their children.

## Objectives

- To examine the correlation between maternal ACEs and the level of paternal involvement: This objective aims to understand the overall relationship between the total number of ACEs experienced by mothers and the extent to which fathers are involved in their infants' lives. This will help determine whether a higher number of ACEs correlates with lower levels of paternal involvement.
- To identify specific ACEs that significantly impact paternal involvement: Not all ACEs may have the same effect on paternal involvement. This objective focuses on identifying which specific types of ACEs (e.g., emotional abuse,

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household dysfunction) are most strongly associated with reduced paternal involvement. This detailed analysis can help in creating more nuanced and effective intervention strategies.

- To provide recommendations for enhancing paternal involvement in families where the mother has a history of ACEs: Based on the findings, this objective seeks to propose actionable recommendations to support families affected by maternal ACEs. These recommendations might include providing mental health support for mothers, parenting programs that include both parents, and community resources to strengthen family dynamics and parental involvement.

By achieving these objectives, the study aims to contribute to the body of knowledge on the intergenerational effects of ACEs and provide practical solutions to support families. Addressing the impacts of maternal ACEs on paternal involvement can lead to better outcomes for children by ensuring that both parents are engaged and supportive in their child's upbringing. This research is essential for informing policymakers, healthcare providers, and social workers who design and implement programs aimed at improving family health and well-being.

## Materials and Methods

### Sample

- Population: The study involves 70 women with infants.
- Inclusion Criteria: Participants are women with documented histories of adverse childhood experiences (ACEs), currently co-parenting with the father of their infant.

### Data Collection [5,6]

**ACE Questionnaire:** Administered to assess the types and frequency of adverse experiences during childhood.

The ACE (Adverse Childhood Experiences) score is measured through a standardized questionnaire developed by researchers Vincent J. Felitti and Robert F. Anda in the 1990s. This questionnaire asks about ten types of adverse experiences that individuals may have encountered before the age of 18:

#### Abuse:

- Physical abuse
- Emotional abuse
- Sexual abuse

#### Neglect:

- Physical neglect
- Emotional neglect

#### Household Dysfunction:

- Substance abuse
- Mental illness
- Domestic violence
- Parental separation or divorce
- Incarceration of a household member

Each type of adverse experience is counted if it was reported to have occurred before the age of 18. For each "yes" response to these

experiences, one point, or ACE score, is assigned. Therefore, the ACE score ranges from 0 to 10, representing the total number of different types of adverse childhood experiences reported by the individual.

**Paternal Involvement Scale [7,8]:** Used to measure the extent of the father's involvement in the infant's life through various caregiving and supportive activities.

#### Scoring and Analysis:

- Scores on the Paternal Involvement Scale are typically computed based on responses to the scale items or observations. Researchers may aggregate scores across items or dimensions to generate an overall measure of paternal involvement.
- Statistical analyses such as descriptive statistics, correlations, and regressions are often used to examine relationships between paternal involvement scores and other variables of interest, such as maternal ACE scores in this case.

**Interviews:** Conducted semi-structured interviews with the mothers to gain deeper insights into their childhood experiences and current family dynamics.

**Observational studies:** Observations of father-infant interactions to objectively assess the level and nature of paternal involvement.

#### Variables

**Independent Variable:** Maternal history of ACEs, quantified using the ACE questionnaire.

**Dependent Variable:** Paternal involvement in the infant's life, assessed through the paternal involvement scale and observational studies.

#### Data analysis

**Descriptive statistics:** Calculation of the mean, median, and mode for ACE scores and paternal involvement scores to summarize the data.

**Correlation analysis:** Use of Pearson correlation coefficient to determine the relationship between maternal ACEs and paternal involvement.

**Regression analysis:** Identification of specific ACEs that predict the level of paternal involvement.

**Qualitative analysis:** Thematic analysis of interview data to identify common themes and patterns related to maternal ACEs and paternal involvement.

This methodological approach provides a comprehensive understanding of how maternal adverse childhood experiences influence paternal involvement in infant care, using both quantitative and qualitative data for robust findings.

## Results

### The descriptive statistics

The descriptive statistics for the study variables are summarized in Table 1.

- The mean Total ACE Score for the sample of 70 women is 4.5, with a median score of 4.0 and a mode of 3. The standard deviation for the ACE scores is 2.1, indicating some variability in the adverse childhood experiences among the participants.

**Table 1:** Descriptive Statistics.

Variable	Mean	Median	Mode	Standard Deviation
Total ACE Score	4.5	4	3	2.1
Paternal Involvement Score	6.8	7	8	1.9

- The mean Paternal Involvement Score is 6.8, with a median score of 7.0 and a mode of 8. The standard deviation for paternal involvement is 1.9, suggesting a relatively consistent level of involvement among fathers, with some variation.

These descriptive statistics provide a snapshot of the distribution of ACEs among the mothers and the corresponding levels of paternal involvement in the sample.

### Correlation between maternal ACEs and paternal involvement

The correlation analysis reveals a significant negative relationship between the Total ACE Score and Paternal Involvement Score. The Pearson correlation coefficient is -0.45, indicating a moderate inverse correlation. This suggests that as the number of Adverse Childhood Experiences (ACEs) increases in mothers, the level of paternal involvement in their infants' lives tends to decrease. The p-value is 0.001, which is highly significant, confirming that this negative correlation is not due to chance (Table 2).

**Table 2:** Correlation between Maternal ACEs and Paternal Involvement.

Variable	Pearson Correlation Coefficient	p-value
Total ACE Score	-0.45	0.001

This result underscores the impact of maternal adverse childhood experiences on the dynamics of paternal involvement, highlighting the importance of addressing maternal ACEs to foster better family involvement and child development.

### Regression analysis - predictors of paternal involvement

The regression analysis identifies specific Adverse Childhood Experiences (ACEs) that predict levels of paternal involvement (Table 3).

**Table 3:** Regression Analysis - Predictors of Paternal Involvement.

Predictor	Beta	Standard Error	t-value	p-value
Emotional Abuse	-0.35	0.12	-2.92	0.005
Household Dysfunction	-0.28	0.1	-2.8	0.007
Physical Neglect	-0.12	0.15	-0.8	0.42

**Emotional Abuse:** The beta coefficient for emotional abuse is -0.35, with a standard error of 0.12. The t-value is -2.92, and the p-value is 0.005, indicating that emotional abuse is a significant predictor of reduced paternal involvement. This suggests that higher levels of emotional abuse experienced by the mother during childhood are associated with lower levels of paternal involvement in their infants' lives.

**Household Dysfunction:** The beta coefficient for household dysfunction is -0.28, with a standard error of 0.10. The t-value is -2.80, and the p-value is 0.007, showing that household dysfunction is also a significant predictor of reduced paternal involvement. This means that mothers who experienced more household dysfunction in their childhood tend to have partners who are less involved with their infants.

**Physical Neglect:** The beta coefficient for physical neglect is -0.12,

with a standard error of 0.15. The t-value is -0.80, and the p-value is 0.42, indicating that physical neglect is not a significant predictor of paternal involvement. This implies that the level of physical neglect experienced by the mother during childhood does not have a statistically significant impact on paternal involvement in this study.

These findings highlight the differential impact of specific ACEs on paternal involvement, with emotional abuse and household dysfunction being significant predictors, whereas physical neglect is not. This information is crucial for tailoring interventions to address the specific types of childhood adversities that have the most substantial effects on family dynamics and paternal involvement.

### Qualitative themes from interviews

The qualitative analysis of interviews with mothers revealed several key themes (Table 4):

**Table 4:** Qualitative Themes from Interviews.

Theme	Description
Emotional Unavailability	Mothers with high ACE scores reported fathers being emotionally distant and less supportive.
Parenting Stress	High ACE scores in mothers correlated with increased parenting stress, affecting paternal involvement.
Need for Support	Many mothers expressed the need for additional family or community support to enhance paternal involvement.

**Emotional Unavailability:** Mothers with higher ACE scores frequently reported that the fathers of their infants were emotionally distant and less supportive. This emotional unavailability from fathers may stem from the strained relationship dynamics caused by the mothers' past traumas and the stressors they face in parenting.

**Parenting Stress:** The interviews highlighted a strong correlation between high ACE scores in mothers and increased levels of parenting stress. This elevated stress often negatively impacts paternal involvement, as stressed mothers may struggle with co-parenting effectively and maintaining a supportive environment for the father to engage with the infant.

**Need for Support:** Many mothers expressed a need for additional support from family members or community resources. They felt that such support could help mitigate the negative impacts of their ACEs on paternal involvement. This theme underscores the importance of external support systems in enhancing paternal engagement and overall family well-being.

These qualitative insights provide a deeper understanding of the challenges faced by mothers with high ACE scores and the resulting impact on paternal involvement. Addressing these themes through targeted support and interventions can help improve family dynamics and foster better outcomes for children.

## Discussion

The study results reveal a significant negative correlation between maternal Adverse Childhood Experiences (ACEs) and paternal involvement. This finding indicates that higher ACE scores in mothers are associated with lower levels of paternal involvement in their infants' lives. The negative correlation suggests that the more adverse experiences a mother has had during her childhood, the less likely the father is to be actively involved in caregiving and other supportive activities for the infant [9].

Two specific types of ACEs—emotional abuse and household

dysfunction—emerged as significant predictors of reduced paternal involvement. Emotional abuse, with its long-term psychological impacts, appears to significantly affect the dynamics of the parental relationship, leading to fathers being less engaged. Similarly, household dysfunction during a mother's childhood, which can include experiences such as domestic violence or substance abuse, has a detrimental effect on the level of paternal involvement. These forms of adversity likely create complex emotional and relational challenges that persist into adulthood, impacting co-parenting dynamics [10].

The qualitative data from interviews further illuminate the nature of this relationship. Three key themes were identified:

- **Emotional unavailability:** Mothers with high ACE scores frequently reported that fathers were emotionally distant and less supportive. This emotional unavailability may stem from the stress and trauma carried over from the mothers' childhood experiences, which can create barriers to establishing a strong, supportive co-parenting relationship.
- **Parenting stress:** There is a clear correlation between high ACE scores in mothers and increased parenting stress. This heightened stress can adversely affect paternal involvement, as the stress experienced by mothers may lead to strained interactions and reduced cooperative parenting.
- **Need for support:** Many mothers expressed a desire for additional family or community support. They felt that such support could help mitigate the negative effects of their ACEs on paternal involvement. This highlights the importance of external support systems in fostering better family dynamics and enhancing paternal engagement.

Overall, these findings underscore the profound impact that maternal childhood adversity can have on paternal involvement in child-rearing. Emotional abuse and household dysfunction, in particular, pose significant challenges to fostering a collaborative and supportive parenting environment. Addressing these challenges through targeted interventions, such as counselling, parenting support programs, and community resources, is essential. Providing support to mothers with high ACE scores can help alleviate parenting stress and improve the emotional climate within the family, thereby encouraging greater paternal involvement [11].

## Conclusion

This study underscores the significant impact that maternal Adverse Childhood Experiences (ACEs) have on paternal involvement in their infants' lives. The findings reveal a clear negative correlation between the number of ACEs a mother has experienced and the level of paternal involvement, indicating that higher ACE scores are associated with reduced paternal engagement. Specifically, emotional abuse and household dysfunction were identified as significant predictors of lower paternal involvement. These types of childhood adversities have long-lasting effects that extend into adulthood, influencing the dynamics of co-parenting relationships.

The qualitative insights from interviews further illustrate the challenges faced by mothers with high ACE scores, including emotional unavailability of fathers, increased parenting stress, and a strong need for additional support. These factors collectively contribute to lower paternal involvement, highlighting the need for targeted interventions to address these issues.

Interventions focusing on emotional support for mothers can play

a crucial role in mitigating the effects of ACEs. Providing counselling and therapeutic services to help mothers process their past traumas can improve their emotional well-being, which in turn can foster a more supportive and cooperative co-parenting relationship.

Stress reduction programs are equally important. Parenting can be a highly stressful endeavour, especially for those who carry the burden of past adversities. Stress management strategies, including mindfulness, relaxation techniques, and parenting education, can help mothers cope better with the demands of parenting, reducing the overall stress within the family dynamic.

Community support is another vital component. Creating a strong support network for families affected by maternal ACEs can provide much-needed resources and assistance. This can include family support groups, community-based programs, and access to social services that offer practical help and emotional support. Such community involvement can alleviate some of the pressures on both parents, enabling better paternal involvement.

In conclusion, addressing the impact of maternal adverse childhood experiences on paternal involvement requires a multifaceted approach. By focusing on emotional support, stress reduction, and enhancing community support, it is possible to create a more nurturing and supportive environment for both parents and their children. These interventions not only benefit the parents but also contribute to better developmental outcomes for the children, promoting healthier family dynamics and stronger parent-child relationships. The findings of this study highlight the importance of comprehensive support systems in breaking the cycle of adversity and fostering positive family environments.

## Recommendations

- **Support programs:** Implement parenting support programs targeting families with maternal ACE histories.
- **Counselling services:** Provide counselling for mothers and fathers to address emotional and relational challenges.
- **Community engagement:** Foster community support networks to assist families in creating a supportive environment for child development.

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