



# A Systematic Review of the Effect of Parental Adverse Childhood Experiences on Parenting and Child Psychopathology

Tiffany Rowell<sup>1</sup> · Angela Neal-Barnett<sup>1</sup>

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## Abstract

Adverse childhood experiences (ACEs) are defined as early exposure to maltreatment and household dysfunction. Researchers have demonstrated the link between ACEs and negative psychological, behavioral, interpersonal, and health outcomes. A growing area of interest in the ACE literature concerns the relationship between ACEs, parenting, and child psychopathology due to the intergenerational effect of ACEs. Emotional availability and discipline strategies are two domains of parenting that can increase understanding of the associations between ACEs, parenting, and child psychopathology from an attachment framework because they are both salient during early childhood and directly influence a child's later behavior. This paper utilized the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to elucidate the relationships between parental ACEs, parents' emotional availability and discipline strategies, and children's psychopathology. PubMed, PSYCINFO, and Psychology and Behavioral Sciences Collection were used to access the literature on June 16, 2020, and 26 studies met the inclusion criteria. Results from this review suggested that there is a direct association between ACEs and parental emotional availability and discipline techniques. Depression and dissociation were identified as potential mediators. There was support for the direct association between parental ACEs and children's internalizing and externalizing difficulties. Maternal anxiety and depressive symptoms, emotional availability, attachment, and children's maltreatment experiences were found to be possible mediators. Recommendations are proposed to address limitations within the literature to further expand upon the research of ACEs, parenting, and child psychopathology.

**Keywords** Trauma · Parenting · Adverse Childhood Experiences · Psychopathology

Over the years, researchers have demonstrated the link between abusive and dysfunctional childhood experiences and negative psychological, behavioral, interpersonal, and health outcomes (Felitti et al., 1998; Hughes & Cossar, 2016; Hugill et al., 2017; Lang et al., 2019; Vig et al., 2020). Together, these experiences are described as adverse childhood experiences (ACEs) that encompass exposure to both maltreatment (i.e., neglect and physical, sexual, and emotional abuse) and household dysfunction (i.e., parental separation or divorce, domestic violence, or living with family members with criminal behavior, substance abuse problems, or mental illness) (Felitti et al., 1998).

One area of interest in the ACE literature has been the intergenerational influence of parental childhood adversity on offspring's wellbeing. Experiencing adversity during childhood can be damaging to a parent's psychological, cognitive, and behavioral areas of functioning because children often lack the necessary skills to cope with the negative emotions and thoughts that arise after exposure to an ACE (Cooke et al., 2019). This can then hinder a parent's ability to become a well-adjusted and supportive caregiver that can appropriately respond to stressful situations (Brodsky, 2016).

## ACEs, Parenting, and Child Psychopathology

The common goals of parenting are to provide safety and support for the cognitive, emotional, and social development of a child into adulthood; however, these goals can be difficult to achieve for those who have early experiences

✉ Tiffany Rowell  
trowell@kent.edu

Angela Neal-Barnett  
aneal@kent.edu

<sup>1</sup> Department of Psychological Sciences, Kent State University, 600 Hilltop Drive, Kent, OH 44240, USA

with maltreatment or household dysfunction (American Psychological Association, *n.d.*). Parenting is an essential and complex variable to examine in the ACE literature because ACEs can lead to attitudes and practices that negatively influence the child. Two areas of particular interest include parents' emotional availability and discipline strategies because both are salient during early childhood and can have consequences for a child's later development and functioning (Sroufe et al., 2003).

Emotional availability refers to a parent's emotional responsiveness to their child's needs and emotional cues. This includes a caregiver's ability to engage in positive parenting practices such as accurately perceiving a child's attachment signals through sensitivity and utilizing non-hostile parenting (Biringen et al., 2010). Findings from the literature revealed that parents who were exposed to ACEs can struggle with emotional availability due to deficits in social and emotional functioning that stem from unresolved distress related childhood adversity (Moran et al., 2008). Therefore, they tend to have interactions with their children that are characterized by increased disengagement, intrusiveness, and hostility and decreased responsiveness, sensitivity, and structure (Fuchs et al., 2015).

Discipline, a related aspect of parenting, is characterized as the practice of teaching children how to obey rules that align with familial and cultural norms and cultivate children's social, emotional, and cognitive development (Nieman et al., 2004). Parents are encouraged to utilize positive reinforcement, modeling, and unconditional support to set boundaries while creating an empowering and nurturing environment (Seay et al., 2014). While researchers and clinicians widely support this form of discipline, it can be challenging for parents to utilize the patience and consistency that is necessary for positive forms of discipline during times of stress (Reece, 2013). This can be especially true for parents with a history of ACEs because they often had poor models of parenting in childhood and, thus, lack the necessary skills to implement effective discipline (Madigan et al., 2006). Many parents, including those with a history of ACEs, tend to associate discipline with frequent punishment and control (Nieman et al., 2004). As such, these parents rely on more aggressive and inconsistent forms of discipline including yelling, hitting, and threatening the child (Van Leeuwen & Vermulst, 2004; Zubizarreta et al., 2019).

### **Attachment Theory as a Framework for the Intergenerational Transmission of Adversity**

Attachment theory can provide a comprehensive explanation for the occurrence of intergenerational transmission as it relates to the relationships between ACEs,

parenting, and child psychopathology because it emphasizes the influence of relational attachment on a child's wellbeing (Bowlby, 1958, 1969). Parents who provided reliable care and comfort often have secure relationships with their children. These children are more likely to effectively regulate their emotions, develop positive self-esteem, and establish and maintain healthy interpersonal relationships with others (Sroufe et al., 2003). Unfortunately, when children are not afforded the opportunity to develop consistent secure attachments with their caregivers, they can have trouble anticipating their own and others' needs for safety and comfort (Erozkan, 2016). This is because children exposed to invalidating environments often develop a negative internal working model of their attachment figure that predicts their beliefs about the self and the world. If the internal working model is comprised of an abundance of poor parent-child interactions, the child is likely to have emotion regulation problems, view others as untrustworthy and unavailable, and consider themselves to be unworthy of love and acceptance (Cicchetti & Doyle, 2016; Cooke et al., 2019; Riggs, 2010).

Attachment theorists believe that these internal working models and attachment patterns predict an individual's interpersonal functioning in adulthood, especially if there is a history of childhood adversity. In support of this claim, multiple studies have linked abuse and neglect to insecure attachment in both childhood and adulthood (Erozkan, 2016; Riggs, 2010; Widom et al., 2018; Zietlow et al., 2017). The compounding effect of ACE exposure and insecure child and adult attachment can negatively influence a parent's ability to be emotionally available and use effective discipline. Given that attachment theory focuses on the quality of parenting in terms of sensitivity and responsiveness to the child, it is expected that parents with insecure attachment would have difficulty being consistently emotionally responsive to their child's needs.

Few studies have explored the role of discipline in attachment theory because researchers often examine parents' roles as attachment and disciplinarian figures separately; however, Verschuere et al. (2006) and Hill et al. (2003) posited that these two aspects of parenting are interrelated. For example, parents' with insecure attachments are more likely to respond to their child's distress with harsh discipline instead of warmth and sensitivity, further increasing the child's distress (Hill et al., 2003). Additionally, the child's attachment and responses to the parent can affect their willingness to respond appropriately to their caregivers' discipline strategies, which can lead to the use of ineffective discipline strategies (Hill et al., 2003). As such, the intergenerational transmission of adversity can occur when the child does not feel emotionally supported

by their parent and is at risk for developing internalizing and externalizing problems (Cicchetti & Doyle, 2016).

## Objective of Review

The purpose of this systematic review is to utilize the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2009) to elucidate the relationships between parental ACEs, parents' emotional availability and discipline strategies, and children's psychopathology. Additionally, the attachment framework will guide the interpretation of these findings. This review will also explore potential moderators and mediators of the relationships between childhood adversity and parenting practices, highlight gaps in the literature, and provide guidance for future directions. Lastly, it is important to note that this review is novel in that it does not only examine the effects of child maltreatment, but also includes household dysfunction as an ACE.

## Method

### Search Strategy

Three electronic databases (PubMed, PsycINFO, and Psychology and Behavioral Sciences Collection) were used to access the literature on June 16, 2020. The search terms were selected to align with the research aims of the paper. An initial search was conducted using keywords associated with ACEs such as *adverse childhood experiences* OR *household dysfunction* OR *child abuse* OR *childhood trauma* OR *childhood adversity* OR *childhood maltreatment*. Additional terms were added that were related to parenting outcomes such as *parenting behavior* OR *parenting practices*. The search then included terms related to childhood outcomes such as *child psychopathology* OR *internalizing behavior* OR *externalizing behavior*. An additional search was conducted by reviewing the list of references of recent relevant meta-analyses and systematic reviews.

### Inclusion and Exclusion Criteria

In line with the Population, Exposure, Comparator, and Outcome (PECO) framework (Morgan et al., 2018), the systematic review included studies that examined the influence of parental ACEs (E) on emotional availability, discipline, or child psychopathology (O) among parents, infants, children, and adolescents (P), compared to parents with no exposure to ACEs (C). As shown in Fig. 1,

16,815 articles were retrieved and 3 duplicates were removed, which resulted in the titles and abstracts of 16,812 articles being reviewed by the first author (TR). During this initial screening process, the first author utilized the follow inclusion criteria to select articles that would be reviewed in the full-text article stage: 1) The study was in English. 2) The study's sample comprised of parents who experienced at least one ACE or children who had parents that reported ACE exposure. 3) The study measured parental emotional availability or discipline strategies as an outcome of parental ACEs. 4) The study measured infant, childhood, or adolescent psychopathology as an outcome of parental ACEs. 5) The full article was accessible and published in a peer-reviewed journal. 6) The study was a primary research article. Papers that were eliminated at the title and abstract stage did not report primary research or solely emphasized parental psychopathology or adult traumatic experiences and only measured other parenting outcomes such as parenting stress, attitudes, efficacy, or competency. Afterward, 50 papers that potentially met the requirements of the inclusion criteria were evaluated as full-text articles. Studies that did not have primary data, examine the unique influence of ACEs, or adequately define their measurement of discipline and emotional availability were excluded at this level, which returned 26 articles that were assessed for their quality.

### Quality Assessment

All articles that met the eligibility criteria were then reviewed by the first author (TR) using the Crowe Critical Appraisal Tool (CCAT) (v1.4) checklist to assess their quality (Crowe et al., 2011). The CCAT requires reviewers to examine various aspects of a study such as its objectives, research design, sampling method, collection method, analyses, and interpretations. Modeling the Lang et al. (2019) paper, the articles were scored and placed into four categories: very high quality (scores greater than or equal to 35), high quality (scores 30 to 34), moderate quality (scores 20 to 29), and low quality (scores less than 20). If papers were rated as low quality, they were not included in the final review of articles. No studies were excluded due to being low quality. As such, the 26 articles were included in the systematic review.

## Results

### Study Characteristics

The initial search produced 16,815 articles. After removing 3 duplicates, screening the titles and abstracts of

16,812 articles, and reviewing 50 full-text articles for eligibility, 26 articles remained (see Fig. 1 and Table 1). Three studies utilized data from the Family Life Project (Zvara et al., 2015, 2017a, b), two included participants from the All Our Families Cohort (Cooke et al., 2019; McDonald et al., 2019), and two sampled from the Avon Longitudinal Study of Parents and Children (Plant et al., 2017; Roberts et al., 2004); however, it was unclear if there was an overlap of participants for the Avon samples. This means that there were likely 23 unique samples in this review with a total of 27,645 adult participants. Sixteen of the studies were cross-sectional and 10 were longitudinal. Regarding the demographic characteristics of the studies' participants, 25 studies sampled mothers and only one study collected data from both mothers and fathers. Twenty studies reported participants' racial/ethnic background. Race and ethnicity varied such that 12 studies had samples with majority White participants, 6 had majority Black participants, 1 study had a sample with Jewish and Arabic participants, and 1 study reported a sample of German participants.

Thirteen studies only included measures of parental emotional availability and discipline, nine studies primarily examined child psychopathology, and four assessed both variables of interest. All 17 studies that collected data on parental emotional availability and discipline also measured other variables that could impact parenting and child psychopathology including depression, dissociation, competency, attitudes about parenting, and maltreatment behaviors. Of those 17 studies, 10 employed observational methods to assess parenting. The 9 studies that collected data on childhood psychopathology relied on self-report measures of this construct (place Fig. 1 and Table 1).

## Quality

Twenty two studies were rated as very high quality and 4 studies were rated as high quality with the CCAT. Many of the studies were strong in their sampling methods due to their extensive efforts to include participants who were representative of their desired population. While all the studies utilized convenience sampling, the participants were recruited utilizing various methods (e.g., newspapers, flyers, word-of-mouth) and locations (e.g., community mental health centers, hospitals, welfare clinics, and daycares). Specifically, studies rated as very high quality detailed their careful sampling techniques that aimed to minimize bias. High quality studies contained populations that either had low generalizability

or self-selection bias because the participants were self-referred.

All the studies exhibited clear reporting of their findings; however, a common limitation among the studies was insufficient control for confounding variables in the analyses. Many studies opted to highlight potential confounds in the discussion section when proposing alternative explanations for unexpected findings. Other limitations included the complete reliance on self-report data ( $n = 16$ ) and use of small sample sizes for the analyses completed ( $n = 8$ ), retrospective reporting of parental ACEs ( $n = 26$ ), and cross-sectional data ( $n = 16$ ).

## Measures

### ACEs

The studies used in this review varied greatly in their assessment and definition of childhood adversity. Most of the studies examining childhood adversity only examined the effects of maltreatment, rather than the aspects of household dysfunction. Specifically, twenty-five studies included parents who were victims of sexual abuse, 22 included physical abuse, 16 included neglect, 12 included emotional abuse, 7 included household dysfunction, and 1 included witnessing a shooting or knowing a shooting victim. Given these findings, the review will primarily focus on the impact of abuse on later parenting and child psychopathology. Many studies utilized specific assessment tools such as the ACE Questionnaire (Felitti et al., 1998) and Childhood Trauma Questionnaire (Bernstein et al., 1994).

### Emotional Availability

Four studies examined parental emotional availability with the Emotional Availability Scales that include measures of sensitivity, structuring, non-intrusiveness, and non-hostility (Biringen et al., 2010). Three studies used scales of sensitivity/responsiveness, detachment/disengagement, intrusiveness, stimulation of cognitive development, positive regard, and negative regard adapted from the National Institute for Child Health and Human Development Study of Early Child Care to encompass the various aspects of emotional availability (NICHD Early Child Care Research Network, 1999). Two studies relied on similar observations and coding systems and two studies utilized self-report measures of parents' sensitivity, hostility, and reactions to their children's negative emotions.

## Discipline

Three studies used the Conflict Tactics Scale (Straus, 1979) to assess parents' responses to stress and aggressive discipline strategies such as yelling, stomping out the room, or trying to hit the child. The Ghent Parental Behavior Scale (Van Leeuwen & Vermulst, 2004) was used in one study to assess parents' use of ignoring, rules, monitoring, punitive or inconsistent discipline, and harsh punishment. Other studies collected data on parents' reports of spanking, shouting, and slapping.

## Child Psychopathology

Many studies relied on self-report measures such as the Child Behavior Checklist (Achenbach, 1991; Achenbach & Rescorla, 2000), Teacher Report Form (Achenbach, 1991), Strengths and Difficulties Questionnaire (Goodman, 1997), and Behavior Assessment System for Children, Second Edition (Reynolds, 2010) to gather data on the children's internalizing and externalizing difficulties.

## Associations Between Parental ACEs and Parenting Behaviors

Sixteen studies examined the direct association between ACEs and parenting behaviors. Overall, the reviewed studies revealed that parents with a history of ACEs were more likely to be less emotionally available and exhibit harsh or ineffective discipline strategies. Exposure to emotional abuse, physical abuse, and neglect was associated with increased hostility toward the child (Bailey et al., 2012; Lyons-Ruth & Block, 1996; Plant et al., 2017). Though Bailey et al. (2012) reported a relationship between parental hostility and early exposure to violence or shooting victims, Banyard et al. (2003) and Lyons-Ruth & Block (1996) did not detect a significant relationship between this type of ACE and hostility. Both Banyard et al. (2003) and Lyons-Ruth and Block (1996) cited possible underreporting and measurement error as explanations for this finding. Multiple studies found that mothers who reported experience with sexual abuse, emotional abuse, or neglect exhibited less sensitivity and responsiveness (Bödeker et al., 2019; Harel & Finzi-Dottan, 2018; Klucznik et al., 2016; Lyons-Ruth & Block, 1996; Madigan et al., 2015; Rea & Shaffer, 2016; Zvara et al., 2015, 2017a, b). Specifically, findings from Zvara et al. (2015) revealed that higher education, higher income, and healthy adult relationships did not serve as protective factors for the mothers in this

particular study, which emphasizes the lasting impact of childhood sexual abuse.

Regarding discipline techniques, parents with a history of adversity, specifically neglect, physical abuse, and sexual abuse, reported an increased use of problematic parenting practices that included permissive and authoritarian styles of discipline, physical punishment (Banyard et al., 2003; Chung et al., 2009; Harmer et al., 1999; Plant et al., 2017; Zvara et al., 2017b). It is important to note that in the Zvara et al. (2017b) study, abused and non-abused mothers reported greater aggression toward their sons. The authors theorized that this likely occurred because boys often present with more externalizing behavioral problems that produce aggressive reactions from their mothers. Additionally, the mothers who did experience sexual abuse may have had poor emotion regulation skills that made it difficult for them to effectively discipline a child with externalizing difficulties.

Two studies reported findings that were not commonly found in the literature. Esteves et al. (2017) did not detect differences in mothers' use of harsh parenting tactics between those with and without a history of childhood physical abuse and Kim et al. (2010) reported a negative relationship between maternal experiences with childhood sexual abuse and punitive discipline. The authors cited various factors that could explain these findings, including maternal depression, uninvolved parenting, and resiliency to the effects of childhood adversity.

## Mediators of the Relationship Between ACEs and Parenting Behaviors

Several studies included analyses to detect potential mediating variables between ACEs and parental emotional availability and discipline. These variables included dissociation, depression, and the oxytocin receptor gene. Specifically, Kim et al. (2010) found that mothers' reports of high dissociative symptoms mediated the relationship between their experiences with punitive discipline during childhood and use of less positive structure and more punitive discipline in adulthood. Both Banyard et al. (2003) and Zvara et al. (2017b) revealed indirect pathways from ACE exposure to parenting difficulties through mothers' reports of depression. Lastly, Reichl et al. (2019), investigated the oxytocin receptor gene as a mediator, but found that the oxytocin receptor gene SNP rs2254298 moderated the relationship between maternal childhood adversity and observed sensitivity, such that the association was non-significant when a mother possessed the SNP rs2254298.



## Direct Associations Between Parental ACEs and Child Psychopathology

Thirteen studies examined the direct relationship between ACEs and child psychopathology. A review of these studies demonstrated that parents who experienced ACEs were more likely to have children with internalizing and externalizing problems. Parental experiences of abuse and neglect were associated with children's emotional problems and disruptive behavior (Babcock Fenerci et al., 2016; Bödeker et al., 2019; Condon et al., 2019; Cooke et al., 2019; Esteves et al., 2017; Letourneau et al., 2019; Madigan et al., 2015; McDonald et al., 2019; Plant et al., 2013; Plant et al., 2017; Roberts et al., 2004; Schickedanz et al., 2018; van de Ven et al., 2020). In the only study of this review that collected data from both mothers and fathers, it was revealed that maternal ACEs had a stronger relationship with child psychopathology than paternal ACEs. The authors offered multiple explanations for this finding, citing potential in utero maternal effects, the overrepresentation of mothers in the sample, and the variations in mothers' and fathers' parenting styles (Schickedanz et al., 2018).

Of the seven studies that collected data on parents' experiences with household dysfunction, only two conducted analyses that examined the associations between types of household dysfunction and child psychopathology. Schickedanz et al. (2018) found that parental exposure to divorce and mental illness and illicit substance abuse in the household were uniquely associated with increases in the child's total behavioral problems. In contrast of these findings, the results from Letourneau et al. (2019) indicated that total ACEs, not the separate aspects of household dysfunction, were related to externalizing symptoms. Given that the findings about household dysfunction are limited and mixed, additional research is needed to understand the unique influence of household dysfunction on child psychopathology.

## Mediators of the Relationship Between ACEs and Child Psychopathology

Ten studies explored possible mediation between ACEs and child psychopathology. Parental anxiety and depression, maternal attachment avoidance, and the child's own experiences with maltreatment were significant mediators of this relationship (Cooke et al., 2019; Letourneau et al., 2019; Madigan et al., 2015; Plant et al., 2013; Plant et al., 2017; Roberts et al., 2004; Schickedanz et al., 2018). van de Ven et al. (2020) examined the child's frontal alpha asymmetry (FAA) as a mediator; however, the analyses demonstrated that FAA was a moderator, such

that children with greater right frontal lobe alpha activity had an increased risk of struggling with internalizing and externalizing problems when their mothers reported childhood adversity.

Four studies directly examined this review's proposed interaction between ACEs, parenting practices, and child psychopathology. Two studies found maladaptive (e.g., shouting, slapping, hostility) and responsive parenting to mediate the relationship between maternal ACEs and children's internalizing and externalizing difficulties after including maternal depression in the model as an antecedent to parenting (Madigan et al., 2015; Plant et al., 2017). On the other hand, Esteves et al. (2017) and Bödeker et al. (2019) were unable to identify harsh parenting (e.g., corporal punishment) and maternal sensitivity as significant mediators of this relationship. Considering these results, the authors of this review could not develop conclusions about specific parenting behaviors as mechanisms explaining the relationship between parental ACEs and child psychopathology.

## Discussion

To summarize the review, 15 studies indicated a direct association between parental ACEs and emotional availability. There was evidence that depression was a possible mediator between ACEs and emotional availability, and the oxytocin receptor gene SNP rs2254298 moderated the relationship between maternal ACEs and parenting sensitivity. Five studies suggested a direct relationship between ACEs and discipline strategies with depression and dissociative symptoms being identified as potential mediators. Findings from thirteen studies indicated a direct association between parental ACEs and children's internalizing and externalizing problems. A child's experiences with maltreatment and maternal anxiety, depression, and attachment avoidance were found to be mediators of this relationship while a child's frontal alpha asymmetry was a moderator. Lastly, two of the four studies that examined parental ACEs, parenting, and child psychopathology together found maternal responsiveness and maladaptive parenting to mediate the association between ACEs and child psychopathology.

The variability in measurement of ACEs and absence of household dysfunction in 21 of the studies makes it difficult to develop conclusions about the relationship between parental ACEs, parents' emotional availability and discipline strategies, and children's psychopathology with certainty. Nonetheless, the findings of this review provide preliminary support for attachment theory as a framework that explains the intergenerational transmission of adversity because the studies emphasized

the significance of early parent–child interactions in the development of social and emotional functioning. Within the context of attachment theory, it is suggested that parents with a history of exposure to maltreatment or household dysfunction tend to develop poor attachments with their parents and eventually, their own children (Widom et al., 2018). This is represented through their lack of emotional availability and use of punitive discipline strategies. Parents who were exposed to ACEs likely engage in maladaptive parenting and experience mental health difficulties because they experienced insensitive and inconsistent caregiving that led to the development of internal working models of others as unreliable. Consequently, these models shaped these parents' attachment behaviors with their own children that negatively impacted their ability to be emotionally available and utilize adaptive discipline strategies during times of conflict and stress. These maladaptive parenting strategies then become detrimental to the child's psychological well-being because he does not feel consistently emotionally supported by his parents, which then increases the likelihood that the child will experience internalizing and externalizing problems. While only one study specifically examined mothers' attachment styles as a mediator of the relationship between ACEs and child psychopathology (Cooke et al., 2019), the findings on emotional availability and discipline are compelling and provide insight into the influence of ACEs on the parent–child relationship and the child's socioemotional development.

It is also important to consider the role of depression in the intergenerational transmission of adversity because the exposure to childhood adversity places parents at risk for developing depression and anxiety, which can also have an effect on later parenting (Cicchetti & Doyle, 2016). In two of the four studies that examined parenting practices as a mediator of the relationship between ACEs and child psychopathology, the mediation models needed maternal depression to precede parenting behaviors to detect an effect of emotional availability or harsh discipline on child psychopathology (Madigan et al., 2015; Plant et al., 2017). Additional research is needed to determine if maternal mental health is an essential factor for the intergenerational transmission of adversity that causes maladaptive parenting practices and eventual poor child psychological functioning.

## Limitations of the Review

This systematic review is the first to utilize the PRISMA guidelines (Moher et al., 2009) to critically assess studies concerning ACEs, parenting, and child psychopathology,

and there are several limitations that should be highlighted to further improve the ACE literature. As stated before, eight studies reported having smaller sample sizes for the analyses completed. This likely contributed to the issue that some studies had with the low generalizability of their findings.

A continual problem in the child maltreatment and ACE literature is that fathers are seldom included in the studies. In this current review, one study collected data on fathers' experiences with childhood adversity and ratings of their parenting practices (Harel & Finzi-Dottan, 2018). The trend of not including fathers in research only allows for the examination of the parent–child relationship and the child's functioning through one parent's perspective. This can be especially problematic for the studies in this review that only collected self-report data from one parent. Consequently, this limitation creates a gap within the literature and our understanding of the familial factors that could influence a child's risk for psychopathology and success in therapy.

Within this review, there was a lack of uniformity among the definition and measurement of ACEs. Almost all the studies focused on forms of maltreatment, while only seven studies assessed for parental experience with household dysfunction. Additionally, 25 studies did not account for the chronicity or severity of ACEs, which is an important area to explore because more severe ACEs can lead to poorer psychological adjustment (Zvara et al., 2017b). Due to these limitations, the review primarily highlights the effects of abuse, which makes it difficult to develop definite conclusions about the relationships between ACEs, parenting, and child psychopathology.

Relatedly, this review also included studies that used retrospective reporting for parental ACEs. While retrospective reporting is a common method for collecting data on childhood adversity, there is the possibility that parents' recollections of their past could become inaccurate over time (Goodman et al., 2003). Parents may also be hesitant to report all the details of the abuse and household dysfunction that endured during childhood. Additionally, the use of retrospective reporting caused many of the studies to be cross-sectional. For this reason, temporal precedence technically could not be established for parental ACEs, parenting, and child psychopathology. Attachment theory would suggest that parental ACEs would influence later emotional availability and discipline, which in turn would affect a child's psychopathology; however, cross-sectional data limits researchers' ability to rule out potential bi-directional effects of the child's psychological difficulties shaping the parent's parenting behaviors.

## Future Directions

Future research should aim to address the aforementioned limitations by first expanding recruitment efforts to include fathers and individuals from both high and low risk populations to ensure the generalizability of researchers' findings. Second, researchers should agree upon a unified definition and measurement of ACEs that includes the chronicity and severity of exposure and emphasizes the importance of household dysfunction for later functioning. It would also be beneficial for this definition of ACEs to include other forms of adversity that stem from social inequities including poverty, discrimination, neighborhood violence, over-policing, food insecurity, and homelessness (McEwen & Gregerson, 2019). Third, there needs to be an increase in prospective longitudinal studies with objective and subjective measurement of parental ACEs, emotional availability, discipline strategies, and child psychopathology to determine the directionality of the relationship between these variables that supports attachment theory. Lastly, while this review primarily examined parents' emotional availability and discipline, future studies should continue to assess the influence other variables that can affect both parenting and child psychopathology, including parental attachment, anxiety, depression, competency, attitudes, and maltreatment behaviors, and school and peer stress. Furthermore, an examination of protective factors such as resiliency, spirituality, adaptive coping, and social support can lead to changes in psychotherapy, community programs, and policy that effectively mitigate the effects of ACEs by increasing access to and use of these resources.

## Clinical Implications

The results from this review underscore the importance of assessing for parents' ACE, mental health history, and parenting behaviors when conceptualizing a child's presenting problems. Screening of parental ACEs creates the opportunity for early trauma-focused intervention

for new parents who are at risk for being less emotionally responsive and sensitive with their infant. This can likely strengthen the parent–child relationship, as well as reduce the probability of a parent utilizing harsh parenting practices and a child developing emotional and behavioral problems in the future (Colegrove et al., 2018; Conn et al., 2018; Gillespie & Folger, 2017). Additionally, the findings emphasize the need for increased implementation of family-based therapies that address both the parent's and child's problems together. It is evident that children's internalizing and externalizing difficulties do not develop in a vacuum and are linked to a myriad of biological, psychological, and social factors. For this reason, a combination of individual and family therapy for both the parent and child may be most beneficial for children who have parents with a history of childhood adversity (Appleyard & Osofsky, 2003; Cohen & Mannarino, 2008; Schechter & Willheim, 2009).

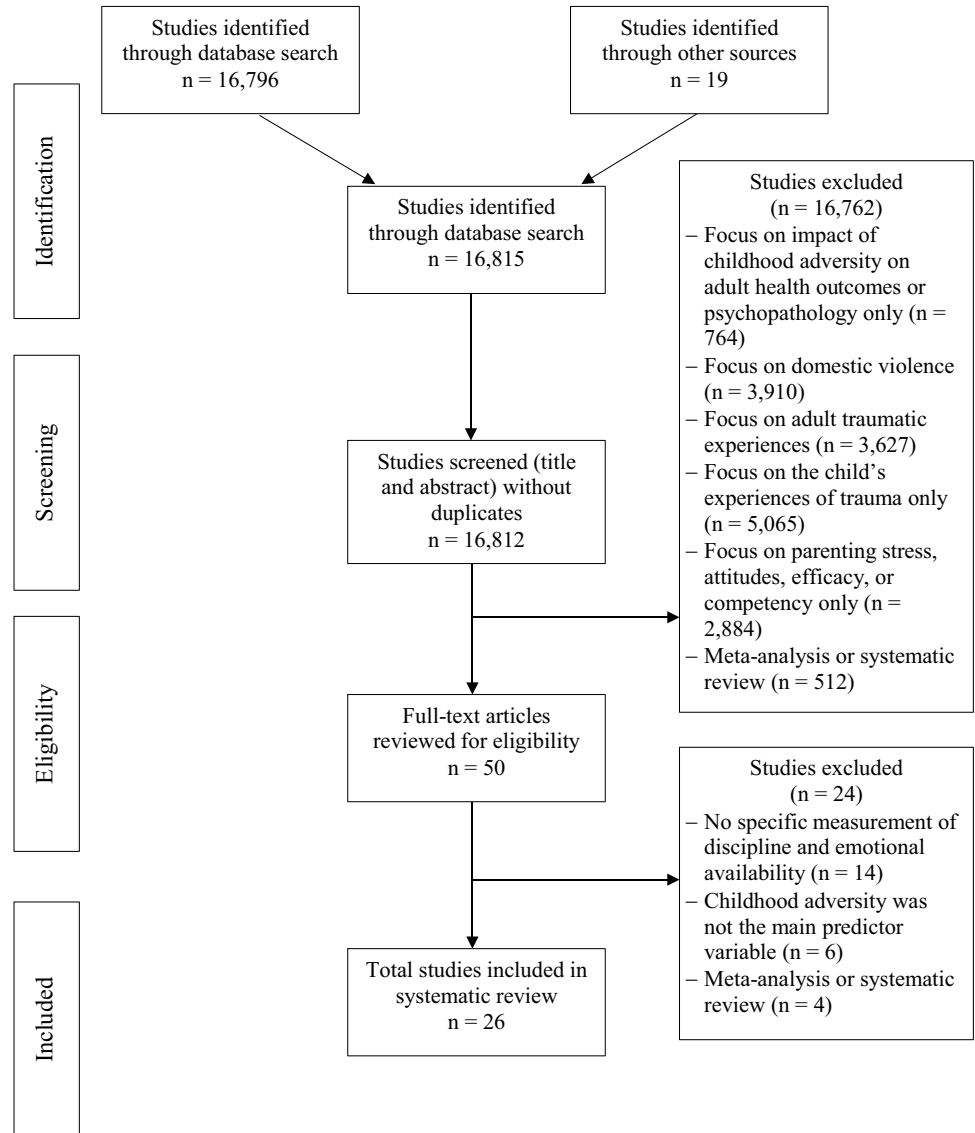
## Conclusions

This systematic review revealed associations between parental ACEs, emotional availability, discipline techniques, and child internalizing and externalizing behaviors that support an attachment framework for the intergenerational transmission of adversity. Three studies indicated that the relationship between parental ACEs and child psychopathology is possibly mediated by a parents' depressive symptoms. Emotional availability can serve as a mediator when preceded by parental depression. Other variables may also mediate or moderate this association, such as maternal anxiety, attachment, and the child's maltreatment experience and front alpha asymmetry. Implications for future research and clinical practice include recruiting more diverse populations to increase generalizability, unifying the definition of ACEs, implementing more prospective longitudinal studies, increasing the screening of parents' experiences with ACEs and psychological difficulties, and offering family-based interventions that address the parent's and child's needs.



## Appendix

**Fig. 1** PRISMA Flow Diagram of Study Selection



**Table 1** Summary of Studies in Systematic Review

| Study                                   | Design | Participants             | ACE Type  | Measure of Parenting Behavior   | Measure of Child Psychopathology  | Quality |
|---|--------|--------------------------|---|---|---|---------|
| Babcock Fenerci et al. (2016)<br>US     | CS     | 70 mothers               | SA, PA  | N/A   | Child Behavioral Checklist  | HQ      |
| Bailey et al. (2012)<br>Canada          | CS     | 93 mothers               | SA, PA, EA, N, witnessing family violence, lack of supervision                                    | Emotional Availability Scales   | N/A   | VHQ     |
| Banyard et al. (2003)<br>US             | CS     | 152 mothers              | SA, PA, witnessing harm or violence   | Conflict Tactics Scale and the CTPSPC Neglect Scale   | N/A   | VHQ     |
| Bödeker et al. (2019)<br>Germany        | CS     | 194 mothers              | SA, PA, EA, N, parent hostility   | Emotional Availability Scales   | Child Behavioral Checklist, Teacher Report Form   | VHQ     |
| Chung et al. (2009)<br>US               | LGT    | 1265 mothers             | SA, PA, verbal hostility, witnessing domestic violence and shooting, knowing a victim of shooting | Report of Infant Spanking   | N/A   | VHQ     |
| Condon et al. (2019)<br>US              | CS     | 54 mother–child dyads    | SA, PA, EA, N   | N/A   | Child Behavioral Checklist  | VHQ     |
| Cooke et al. (2019)<br>Canada           | LGT    | 1994 mother–child dyads  | SA, PA, EA, N, HD   | N/A   | Behavioral Assessment for Children, Second Edition  | VHQ     |
| Esteves et al. (2017)<br>US             | CS     | 101 mother–child dyads   | PA  | Conflict Tactics Scale  | Child Behavioral Checklist  | VHQ     |
| Harel and Finzi-Dottan (2018)<br>Israel | CS     | 213 mothers and fathers  | SA, PA, EA, N   | Ghent Parental Behavior Scale   | N/A   | HQ      |
| Harmer et al. (1999)<br>Australia       | CS     | 46 mothers               | SA, N, punishment   | The Parenting Scale   | N/A   | HQ      |
| Kim et al. (2010)<br>US                 | CS     | 127 mothers              | SA, punitive discipline   | Items assessing positive structure and punitive discipline  | N/A   | VHQ     |
| Kluczniok et al. (2016)<br>Germany      | CS     | 188 mother–child dyads   | SA, PA, EA, N, antipathy  | Emotional Availability Scales   | N/A   | VHQ     |
| Letourneau et al. (2019)<br>Canada      | LGT    | 907 mothers              | SA, PA, EA, N, HD   | N/A   | Child Behavioral Checklist  | VHQ     |
| Lyons-Ruth and Block (1996)<br>US       | CS     | 45 mothers               | SA, PA, N, witnessing violence  | Sensitivity Scale, Interfering Manipulation Scale, Covert Hostility Scale, and Flatness of Affect scale | N/A   | HQ      |
| Madigan et al. (2015)<br>Canada         | LGT    | 501 mothers              | SA, PA  | Coding of Attachment-Related Parenting scale and Parent–Child Interaction System                        | Items assessing internalizing symptoms from the National Longitudinal Survey of Children and Youth            | VHQ     |
| McDonald et al. (2019)<br>Canada        | LGT    | 1994 mother–infant dyads | SA, PA, EA, N, HD   | N/A   | Child Behavioral Checklist  | VHQ     |
| Plant et al. (2013)<br>UK               | LGT    | 125 mothers              | SA, PA, EA, N   | N/A   | Assessment of DSM-IV symptoms of CD, ODD, and depression with the Child and Adolescent Psychiatric Assessment | VHQ     |

**Table 1** (continued)

| Study                           | Design | Participants   | ACE Type                 | Measure of Parenting Behavior   | Measure of Child Psychopathology   | Quality |
|---------------------------------|--------|--|--------------------------|---|--|---------|
| Plant et al. (2017)<br>UK       | LGT    | 9397 mother–child dyads  | SA, PA, EA, N            | Items assessing use of shouting and slapping and feelings of hostility toward their child | Development and Well-being Assessment and Strengths and Difficulties Questionnaire     | VHQ     |
| Rea and Shaffer (2016)<br>US    | CS     | 64 mothers   | SA, PA, EA, N            | Coping with Children's Negative Emotions Scale and observations                           | N/A  | VHQ     |
| Reichl et al. (2019)<br>Germany | CS     | 193 mothers  | SA, PA, EA, N, antipathy | Emotional Availability Scales   | N/A  | VHQ     |
| Roberts et al. (2004)<br>UK     | LGT    | 9138 mothers   | SA                       | N/A   | Strengths and Difficulties Questionnaire   | VHQ     |
| Schickedanz et al. (2018)<br>US | CS     | 2529 children with either 1 or more parents reporting ACE data | SA, PA, EA, N, HD        | N/A   | Behavior Problems Index and report of previous ADHD or emotional disturbance diagnosis | VHQ     |
| van de Ven et al. (2020)<br>US  | CS     | 45 mother–child dyads  | SA, PA, EA, N            | N/A   | Child Behavioral Checklist   | VHQ     |
| Zvara et al. (2017a)<br>US      | LGT    | 204 mothers  | SA                       | Observation of parenting behavior   | N/A  | VHQ     |
| Zvara et al. (2015)<br>US       | LGT    | 204 mothers  | SA                       | Observation of parenting behavior   | N/A  | VHQ     |
| Zvara et al. (2017b)<br>US      | LGT    | 204 mothers  | SA                       | Conflict Tactics Scale, Observation of parenting behavior                                 | N/A  | VHQ     |

*Note.* CS = cross-sectional, LGT = longitudinal, SA = sexual abuse, PA = physical abuse, EA = emotional abuse, N = neglect, HD = household dysfunction, VHQ = very high quality, HQ = high quality

## Declarations

**Conflict of Interest** The authors declare that they have no conflict of interest.

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