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To cite this article: Kathryn L. Humphreys (2019) Future Directions in the Study and Treatment of Parent–Child Separation, *Journal of Clinical Child & Adolescent Psychology*, 48:1, 166-178, DOI: [10.1080/15374416.2018.1534209](https://doi.org/10.1080/15374416.2018.1534209)

To link to this article: <https://doi.org/10.1080/15374416.2018.1534209>



Published online: 17 Dec 2018.



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## FUTURE DIRECTIONS

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# Future Directions in the Study and Treatment of Parent–Child Separation

Kathryn L. Humphreys

*Department of Psychology and Human Development, Vanderbilt University*

Children require adult caregivers to survive and thrive. In the absence of committed and nurturing care, children face increased risk for a number of difficulties, including internalizing and externalizing psychopathology, cognitive and language deficits, and social difficulties. Recent changes in the U.S. immigration system have resulted in a large number of children removed from their parents, drawing increased scrutiny to the impact of parent–child separation and best practices for caring for children who have been separated. Drawing from work on children exposed to institutional care, as well as research on children separated from caregivers due to validated abuse and neglect, it is clear that children belong in families that are safe and supportive and that some forms of substitute care (i.e., institutional or group-based care) are insufficient to meet children’s needs. However, it is difficult to know the specific impact of parent–child separation on child outcomes given that stressors often cluster and pre-separation experiences and post-separation placements also contribute to the experience of separation from a parent and subsequent functioning. Attempts to parse the specific contributions of each separation-related stressor, examining sensitive periods in the impact of separation, studying the mechanisms by which separations affect children, and consideration of the broader social and political context are useful future directions for moving this area of study forward. We must also more fully probe the roles that caregivers play in child development. Lastly, we must endeavor to cease practices of removing children from loving and capable caregivers and, when necessary, provide support to parents and children who have experienced separation.

Children have the best chance for success under the care of committed and nurturing caregivers (typically children’s biological parents; Gadsden, Ford, & Breiner, 2014). Throughout evolutionary history, orphaned or abandoned children were not likely to fare well. However, with civilization came the resources to provide care for separated or abandoned children. In these cases, children were much more likely to live until adulthood, as basic instrumental care needs (e.g., food, shelter, and clothing) provided the necessities for survival. However, merely surviving is insufficient, and setting aside the psychological needs of children (i.e., having a committed and nurturing caregiver) is likely to result in significant harm. Despite these known risks, policies were recently in place in the United States that separated children from their caregivers (e.g., as a consequence of a “zero tolerance” immigration policy; Office of the Attorney General, 2018). All United Nations member states,

except for the United States, are a party to the United Nations Convention on the Rights of the Child (United Nations, 1989). One cited reason for U.S. resistance to this binding international law is that involvement in the law might threaten parental rights (Klicka & Estrada, 2007). Thus, it is ironic that the United States engaged in practices that took away such rights from immigrant families by separating children from their parents, including those who committed no crimes.

Dr. Colleen Kraft, president of the American Academy of Pediatrics, called this “government sanctioned child abuse” (Shoichet, 2018, para. 4) given that the approach to detaining children and parents separately results in an explicit trauma to the child, affects ongoing attachment processes required for development, and undermines family unity. There is an impetus to cease the inhumane practices of separating children from loving caregivers and to quickly reunify families who were separated. Current efforts to reunify children separated from parents are made more difficult given that records linking parents and children were overwritten by border control procedures to reclassify these children as “unaccompanied children” (Bump, 2018, para. 6). Immigration-related parent–child

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Correspondence should be addressed to Kathryn L. Humphreys, Department of Psychology and Human Development, Vanderbilt University, Peabody College, 230 Appleton Place #552, Nashville, TN 37203. E-mail: [k.humphreys@vanderbilt.edu](mailto:k.humphreys@vanderbilt.edu)

separations by the state are clearly abhorrent and should be avoided. Given that parents and children are separated for a variety of reasons, simple prescriptions about avoiding all parent–child separations are often more difficult to implement in practice. There are circumstances in which separations are clearly appropriate (e.g., severe maltreatment). However, the complexities of assessing children’s environments make it difficult to determine the past, current, and future risk for children to experience abuse and neglect. Who should decide which caregivers are appropriate, and by what criteria? When children are separated, how should alternative care be determined? How can we distinguish the impact of separation from other forms of adversity these children have experienced? In this article I briefly review the research on children separated or reared without their caregivers, discuss challenges to research on this topic, and identify some potential future directions in the study and treatment of parent–child separation.

### Children Reared Without Caregivers

A number of pathways lead to the circumstances under which children are separated from caregivers, and separated children are not a monolithic group. To speculate on the impact on separations related to U.S. immigration policy, some have drawn from studies of early adversity (Zucker & Greene, 2018) as measured via the “ACEs” (i.e., a set of 10 adverse childhood experiences; Felitti & Anda, 2014). However, the body of evidence on being reared without a caregiver may be a more appropriate analog. In a few known cases, children were found to have experienced profound deprivation in which no apparent adult care was provided (e.g., Dina Sanichar; Zingg, 1940) or had parents who were extremely neglecting (e.g., “Genie”; Curtiss, 2014). Such case examples offer insight into the essential roles that caregivers play in offering not only sustenance for physical needs but also provision of cognitive stimulation through language and responsive care, as well as stress-buffering, warmth, and encouragement. These needs are unlikely to be met in a context outside of family care, and many children separated from caregivers at the border have been placed in group detention centers (Domonoske & Gonzales, 2018). Such settings insufficiently provide individualized responses to children, given the high child-to-caregiver ratios, and affect the development of secure attachments with caregivers due to the shift-based schedules and rotating staff (Dozier, Zeanah, Wallin, & Shauffer, 2012; Zeanah, Smyke, & Settles, 2006).

Although children adopted from institutions and placed into families were found to fare better than those children who remained in institutions, the possibility of selection effects (i.e., higher functioning children being more likely to be selected for adoption) had precluded the ability to be confident that family care was responsible for the differences in observed child outcomes (Zeanah et al., 2003). In the context in which those responsible for making

placement decisions for abandoned children were unsure of whether family care was preferable to institutional care, a randomized controlled trial called the Bucharest Early Intervention Project (BEIP; Nelson, Fox, & Zeanah, 2014; Zeanah et al., 2003) began, with the goal of examining the outcomes of children who were abandoned at or shortly after birth and placed in institutional care. The investigators created a study-sponsored foster care network given that no local system was in place to care for these children in families. Half of the children were randomly assigned to be placed in these foster placements, which were designed to be of high quality, developmentally and culturally sensitive, and long term (e.g., encouraging foster parents to treat the children as though they were their own). For the first time, causal evidence of the effects of family placement, as compared to children in the care as usual condition (typically characterized by remaining for a longer duration in institutional care), improved physical growth, brain function, cognition, language, social skills, attachment formation, and mental health (Nelson et al., 2014). Findings from the BEIP provided the strongest evidence to date to support what individuals who worked with children already knew: Children belong in families and fare best in contexts with committed, consistent caregivers. Although others have continued research focused on testing how to improve institutional care (The St. Petersburg—USA Orphanage Research Team, 2008), it has become clear to most who work in this area that “there is no such thing as a good institution” (see Berens & Nelson, 2015, p. 2). Rather, efforts should be made to find alternative caregivers for separated children who are committed to the child long term and have developmentally appropriate expectations and support for caring for a child who may face additional challenges (Smyke, Zeanah, Fox, & Nelson, 2009).

Bowlby (1951) noted that separation from mothers was associated with negative outcomes in children. Children were perceived to be affected not only by the trauma of the separation but also by the disruption of an attachment relationship, representing an additional adversity. He observed that children in institutions were at increased risk of antisocial behavior and were more likely to be characterized by deficits in empathy (applying the label of “affectionless psychopaths” to a large percentage of boys in such care), citing the lack of bonding with a mother as crucial to the etiology (Bowlby, 1944). Such findings have been echoed by more recent studies that systematically followed children who experienced institutional care in early life, finding increased levels of callous-unemotional traits in those with this background relative to comparison children reared in their biological families (Humphreys et al., 2015; Kumsta, Sonuga-Barke, & Rutter, 2012). In fact, much of what we know about the impact of caregiver separation in children comes from studies of institutional care. Such designs typically compare children with prolonged exposure to institutional care to children in families or examine the duration of exposure to

institutional care on a variety of outcomes. Generally, this program of research indicates that family care, earlier placement into families, and stable placement in families is associated with the best outcomes (Humphreys, Fox, Nelson, & Zeanah, 2017; van IJzendoorn et al., 2011).

Given the vast literature finding that children's caregiving is associated with mental health (Gadsden et al., 2014), it is not surprising that children separated from parents are at elevated risk for psychopathology. Increased risk of internalizing (e.g., depression and anxiety), externalizing (e.g., oppositional, defiant, and aggressive behaviors), attention-deficit/hyperactivity disorder, and attachment disorders (e.g., reactive attachment disorder and disinhibited social engagement disorder) (e.g., Green et al., 2016; Humphreys et al., 2017; Kreppner et al., 2007; O'Connor, Marvin, Rutter, Olrick, & Britner, 2003; Wiik et al., 2011) are associated with rearing outside of a family context. Findings from the BEIP indicated that placement into family care mitigates risk for many of these disorders (Humphreys et al., 2017). Such findings may be only partially relevant to children who have experienced other forms of parent-child separations, as specific behaviors may be a consequence of chronic deprivation or psychosocial neglect (Rutter et al., 2010) rather than separation from a known caregiver.

Research on other forms of parent-child separation have found that these children are at increased risk for internalizing symptoms, disruptive behavior problems, and attachment disorders (e.g., among children separated from caregivers due to involvement in child welfare; Dozier, Zeanah, & Bernard, 2013). Among families with presumably no elevated risk for maltreatment prior to separation (i.e., natural disaster victims), separation from a caregiver following a bushfire was associated with increased symptoms of posttraumatic stress disorder in children, and these elevated symptoms persisted for at least 2 years after returning to the care of parents (McFarlane, 1987). Although these findings indicate that the separation exacerbated the impact of the trauma, it is difficult to isolate the experience of separation from other risk factors, particularly given that children who were separated from their parents posttrauma had more severe exposure to the natural disaster. Parent-child separations due to war or migration are associated with increased risk for mood disorders and symptoms (Rusby & Tasker, 2009; Santavirta, Santavirta, Betancourt, & Gilman, 2015; Suárez-Orozco, Todorova, & Louie, 2002). Given that separation from caregivers has been found to predict difficulties in subsequent bonding between parents and children, as well as lower levels of self-esteem (Smith, Lalonde, & Johnson, 2004), the quality of the parent-child relationship may be a crucial mediator or moderator of long-term outcomes following separation. It is possible that some of the initial responses to separation may remit over time when families are reunified. Immigrant youth who were reunified

with parents after separations appeared to have initial elevations in anxiety and depression symptoms that abated over time (Suárez-Orozco, Kim, & Bang, 2011).

## RESEARCH CHALLENGES

### Varieties of Parent-Child Separation

There are multiple potential avenues that lead to parent-child separation. These include children removed from caregivers due to maltreatment, homelessness, imprisonment, or detainment due to lack of required immigration documentation; children abandoned by parents, sometimes by choice and sometimes due to death; and separation or divorce of parents that leads to the child being separated from at least one caregiver (Galatzer-Levy & Kraus, 1999). Considered on a continuum, children whose parents travel for employment (e.g., deployments related to military service; seasonal farm work) experience separations. Children whose parents work long hours that keep them away from the home for extended periods or during children's waking hours (e.g., pilots, truck drivers, and physicians during medical residency) may experience caregiver absence. It has been previously noted that types of parental loss differ in meaningful ways (e.g., Tennant, 1988), and these same types of differences are relevant to separations that may or may not ultimately result in permanent loss. The aforementioned situations likely differ in (a) quality of the caregiving relationship prior to the separation, (b) controllability and desirability of the separation, (c) ability to prepare for and acknowledge the separation, (d) the permanence of the separation, (e) the expected length and chronicity of the separation, (f) the ability of parents and children to engage in visitations or phone contact, and (g) correlated risk factors for psychopathology. Although we may generally consider parent-child separation to be undesirable or something to avoid at all costs, the rates of infant and child mortality due to abuse and neglect by caregivers (U.S. Department of Health & Human Services, 2018) provides strong evidence that some children should be separated from caregivers (ideally prior to exposure to serious harm). Thus, it is important to acknowledge that parent-child separations differ and that, to better understand the impact of such separations, we must examine the pre-separation environment, necessity of the separation for the child's well-being, and post-separation placement.

Furthermore, the age of the initial separation is relevant. For separations due to contact with the child welfare system, an earlier age of separation (e.g., infancy) predicted greater duration of time spent in foster care (see Wulczyn, Ernst, & Fisher, 2011). Last, considerations of the attachment relationships are absent from simplistic models of parent-child separation (e.g., binary groupings of children based on whether a separation has occurred). If the child is separated

from all known caregivers, the experience of trauma would be considered quite different than if the child was separated from one caregiver but was able to maintain a relationship with another in which a secure attachment had been developed. Such understanding could provide guidance for policymakers, in cases in which separation has occurred and reunification is not imminent, in considering placement alternatives that best meet the child's psychological needs.

### Causal Inference

As just noted, determining causality in research on adversity in humans is challenging. For ethical reasons, we cannot (and should not) experimentally manipulate children's experiences with separations from their caregivers. Unfortunately, some children experience a disproportionate amount of stress in their lives, starting prenatally, given the nonrandom nature of experiences that are considered harmful (Dong et al., 2004). As a result, it is difficult to parse the causal impact of a single event. Forced separations of migrants and refugees by the government often places children in the care of strangers, compared to other immigration-related parent-child separations when children are deliberately left in the care of kin. Determining the impact of premigration experiences, separation from one's caregiver, and the type and quality of the subsequent placements are all independent (and interactive) characteristics of the child's experience (see Figure 1).

Further, children who are separated from their caregivers may differ in not only the experiences associated with the separation but also genetic risks. Although this is likely moderated by the reason for the separation, our understanding of stress generation (Adrian & Hammen, 1993) and genetic influences on environmental experiences (Kendler & Baker, 2007) suggest that most programs of research on parent-child separation will be unable to account for genetic

risk on child outcomes. One possibility is that parents who choose to place their children into institutional care are at elevated genetic risk for callous-unemotional traits or propensity to experience despair. Another possibility is that parents who take great risk to bring their child to a perceived safe haven to escape risks in one's home country have inherited traits associated with grit or resilience. When inherited traits that may affect later child functioning are associated with the likelihood of experiencing an event, then determining what degree the functioning is attributable to the event is difficult (see Sherlock & Zietsch, 2018).

Although we have benefited from a growing body of nonhuman animal research attempting to parse the types and timing of stress related to "maternal separation" (Nishi, Horii-Hayashi, & Sasagawa, 2014; Sánchez, Ladd, & Plotsky, 2001), we are limited by an inability to draw clear comparisons to stressors, phenotypes, and timing across species (Brett, Humphreys, Fleming, Kraemer, & Drury, 2015). Humans are unique in many ways, including our prolonged period of complete reliance on others to survive, relative to other species.

### Definitional and Informant Issues

Obtaining accurate reports regarding childhood experiences is challenged by known difficulties in informant agreement (De Los Reyes et al., 2015; Oransky, Hahn, & Stover, 2013), infantile amnesia and reliability of child reporters, and cultural differences in beliefs about the acceptability and consequences of parent-child separation that may affect social desirability. In many cases, records may exist to mark the start and end of official parent-child separations. However, the same informant issues as just outlined apply to potential confounders or correlated risks associated with parent-child separation, resulting in measurements that lack certainty. Last, parent-child separation may primarily be

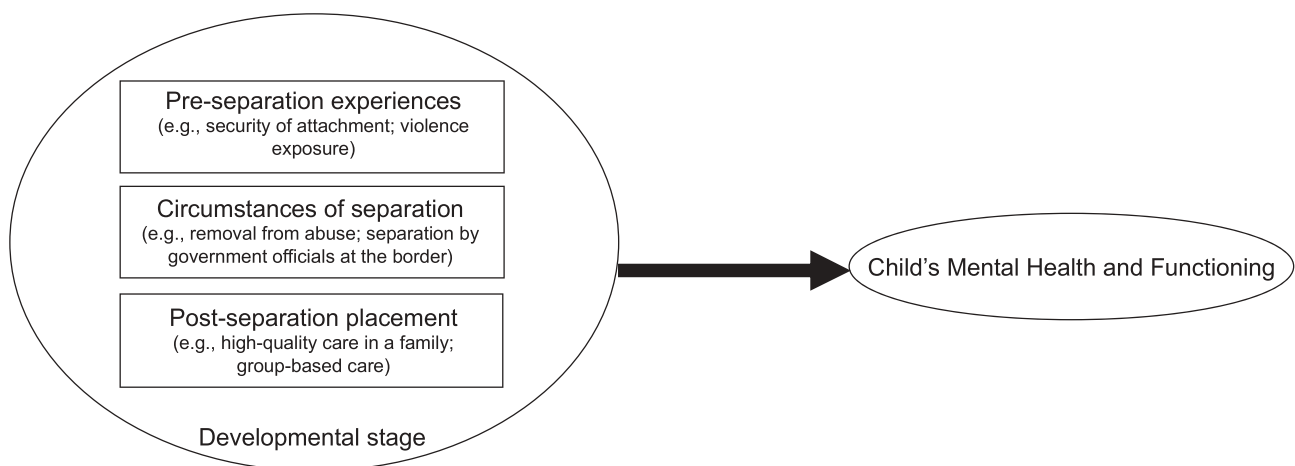


FIGURE 1 Conceptual model in examining the impact of parent-child separation on child mental health and functioning.



considered a binary determination (i.e., one either was or was not separated from their caregiver). However, consideration of other facets of separation (e.g., length and number of separations and quality of the pre-, peri-, and post-separation environment) may be better achieved along a continuum. Important to note, the association between these markers and presumed outcomes may be nonlinear (Humphreys, 2016). For example, each day of separation may not be associated with a similar effect on child mental health and functioning. Although longer periods of separation from an attachment figure are hypothesized to predict poorer outcomes, the per-unit increment in prediction may diminish for longer separations.

## FUTURE DIRECTIONS

The research challenges just outlined also point us to potential opportunities for better understanding the consequences of parent–child separation, determining how best to prevent such separations, and more accurate assessment and appropriate service delivery to families to ameliorate difficulties stemming from separations.

### Parsing the Types of Stress

Stressful experiences tend to cluster. Rutter (1989) pointed out that certain events in childhood set into motion a cascade of effects. Parent–child separation is likely to be associated with other risks, including relocation, reduced income generation for the household, potential harm exposure through the introduction of alternative adult care providers, and reduced monitoring and stress buffering provided by the absent parent. Statistical modeling to explicitly consider the covariation and unique contributions of types of stressful experiences may be able to advance our understanding of the specificity of the effects of parent–child separation. Similar to considerations of a *g* factor for intelligence (Jensen, 1998) or a *p* factor for psychopathology (Caspi & Moffitt, 2018), identifying a pattern of stressors that may “hang together” could be useful (e.g., Briggs-Gowan et al., 2018). Furthermore, bifactor models (Chen, Hayes, Carver, Laurenceau, & Zhang, 2012; Reise, Morizot, & Hays, 2007), which allow for individual measures to contribute variance to the overall central factor of interest, as well as unique variance not explained by that factor, would provide the opportunity to determine general and unique contributions of parent–child separation on outcomes of interest. Determining the degree to which psychopathology is attributable to stressful experiences broadly, versus specific contributions related to separation from an attachment figure, would be illuminating. An alternative approach to achieve a similar goal would be to apply network models to this area of research. Network models allow for multiple correlated units of interest to interact and provide the ability to determine

which part of the network is most important in predicting the behavior of the network (van Bork, van Borkulo, Waldorp, Cramer, & Borsboom, 2018). Applied to the circumstances surrounding parent–child separation, network modeling may allow for further identification of which aspect in the chain of events is “driving” the other features of the separation experience and which aspect is most predictive of subsequent functioning. Latent class approaches may also be useful for identifying such patterns of stress covariation (e.g., King, Humphreys, Camacho, & Gotlib, 2018).

Explicit consideration of the potential for stressors to interact, as well as protective factors (e.g., placement with a known relative following separation) to mitigate the specific impact, should be tested. Modeling techniques that allow for exploration of model fit with each parameter (Bozdogan, 1987) should help to prioritize parsimony, and when possible, a replication sample should be sought for examination of fit statistics given the tendency for overfitting to occur during exploratory analyses. Preregistration of analyses, part of the open science movement (Nosek et al., 2015), has the advantage of both avoiding “HARKing” (hypothesizing after the results are known; Kerr, 1998) and establishing a clear analytical plan from the start, which would ideally capture all relevant variables. Furthermore, although many of us were trained to covary for as many related factors as possible (see Steiner, Cook, Shadish, & Clark, 2010) to see whether an association between two variables remain significant following “control” of often uncontrollable variables, such practices are likely to be problematic when the “covariates” are actually mechanisms (e.g., covarying for reported distress following separation in examining the association between parent–child separation and subsequent psychopathology; see Kraemer, 2015; Rohrer, 2018). These tools could be used to explore the constellation of separation-related experiences that are most likely to result in negative outcomes, and how the post-separation environment, connection to other attachment figures, and availability of treatment moderate these outcomes.

Another approach, known as propensity score matching (Harder, Stuart, & Anthony, 2010), is used when randomized controlled trials are not possible. The goal (and challenge) of propensity score matching is to find two groups of participants who differ only in the variable of interest. Recently, an article published by Côté, Orri, Marttila, and Ristikari (2018) examined whether out of home placements in childhood were associated with increased rates of psychiatric diagnoses and criminal convictions in adulthood. Using a population-wide cohort sample, the authors used propensity score matching to reduce the likelihood that child level (e.g., age and sex) or family-level characteristics (e.g., parental psychiatric history) differed between the individuals who were and were not placed out of the home. Their findings that children who experienced out-of-home placements were more likely to meet

criteria for a number of psychiatric disorders and had higher rates of criminal convictions were used to argue that placement outside of the family is deleterious. Although it may well be the out-of-home placement that was responsible for elevated risk, some features were difficult or impossible to match. It is not clear whether differences in child’s exposure to abuse or neglect differed in these groups (e.g., children removed from care may have likely experienced harsher caregiving environments than their matched controls). In addition, as noted in the commentary on this article (Nelson, 2018), even though the matched groups were selected to have the same rates of parental psychiatric disorder, two parents with the same disorder can vary widely in the presentation, severity, and chronicity of that disorder. Parents with more severe major depressive disorder may have been more likely to also have a child placed out of home, and thus a child whose parent had a brief episode of major depressive disorder that responded to intervention may not be an ideal matched comparison. In terms of causal explanations, greater parental psychiatric severity could be responsible for at least some of the observed effects in adulthood through both environmental (pre-separation caregiving experiences that contributed to the likelihood of being placed out of home; e.g., more severe experiences of abuse or neglect) and nonenvironmental (i.e., inherited risk) pathways. These point to difficulties with propensity score matching approaches, but still, this approach holds promise given the clear ethical limitations in experimental design.

One additional approach, often implemented by our colleagues in other social science disciplines, is the use of “quasi-experiments.” Child welfare agencies function independently, and as a result, the policies and practices are not uniform even among closely situated jurisdictions. Thus, the differences in threshold for initial removal from parental care, termination of parental rights, and requirements for parents seeking to regain custody of their children allow for the ability to identify the consequences for more lenient or more restrictive policies on a large-scale level. These discrepancies, although often confusing and upsetting to those trying to navigate the child welfare system, pose opportunities to probe the consequences of varying decision-making guidelines regarding parent–child separation and reunification. Further, given that child welfare systems have sometimes had competing goals of (a) prioritizing child’s physical safety and (b) due process claims of parents to preserve families, the impact of such shifting priorities may be able to be linked with historical record review that aligns with stated priorities of the U.S. child welfare system (see Zeanah & Humphreys, 2018). Identifying and coding records from child welfare agencies and their contracted service providers may be a Herculean task, yet it is likely that these data sets could help to answer critical questions about the importance of placement stability, the effect of age of placement (discussed further next), and whether kin are

preferable to non-kin care when parents are unavailable. In addition, this work can inform policies about durations of separation that are acceptable. For example, although parents struggling with substance use disorders should be given the opportunity to rehabilitate and meet the needs of their children, how long should children be in “limbo” wondering when and whether they will have a permanent caregiver (see Miron et al., 2013)? In these cases, the goal of family unity could result in prolonged suffering in children exposed to unpredictable environments and increased risk for maltreatment (Smith, Johnson, Pears, Fisher, & DeGarmo, 2007). The value of maintaining established attachment relationships with caring and committed parents (e.g., non-kin foster parents) versus (re)unification with biological relatives (including siblings whom the child may have never met) represent challenging real-world concerns that research programs can try to address with empirical data.

### Consideration of “Sensitive Periods” in Development

Research on the effects of parent–child separations must be informed by sensitive periods. Consideration of neural plasticity and the increased responsiveness to the environment in early life (Stiles, 2000) bring new urgency to the impact of adversity in young children. Earlier age at placement into foster care from institutional care has been found to predict improved cognitive, language, and socioemotional outcomes (Nelson et al., 2014). More recently, we have found that, among a community sample of early adolescents, the severity of adversity experienced through age 5 years was linearly associated with reduced hippocampal volume, even after accounting for severity of stressors in later childhood (Humphreys et al., 2018). Many stressful event checklists and interviews assessing significant life events obtain the timing of these events (e.g., onset, offset, duration, and chronicity). Yet researchers often set aside this valuable information and sum the total number of events (i.e., a cumulative risk approach) regardless of stress timing. There have been important conceptual advances in distinguishing types of adversity (e.g., deprivation/inadequate input vs. threat/excessive or harmful environmental input) in psychopathology and neural outcomes (Humphreys & Zeanah, 2015; Sheridan & McLaughlin, 2014). I suggest that the next wave of research use the same care for considerations of timing and the potential for sensitive periods. Indeed, important findings and guiding frameworks for the consideration of the role of the environment on human and nonhuman organisms has been usefully extended to consideration of stress and developmental timing (Andersen et al., 2008; Curley & Champagne, 2016; Pechtel, Lyons-Ruth, Anderson, & Teicher, 2014; Teicher & Andersen, 2008; Zeanah, Gunnar, McCall, Kreppner, & Fox, 2011), and machine-learning tools such as random forest regression may allow researchers to identify the times in development in which separation may be associated with the greatest

risks (e.g., using childhood maltreatment; see Fujisawa et al., 2018). Research on how experiences in early development, including prenatally and in the first few years after birth, affect the developing brain and set the foundation from which further neural connections are built, are essential for clarifying the evidence on the impact of early life experiences. A growing body of research is highlighting how adverse experiences in early life affect brain function and structure (Fair, Graham, & Mills, 2018). Although this recommendation for considering timing is appropriate for all work on adversity, given the importance of attachment processes in early life, timing and sensitive periods may be particularly relevant in the study of parent–child separations. It remains an important question in the field to identify whether parent–child separations that precede attachment formation have the same consequences as separations postattachment formation.

The development of attachments in early life are important in our understanding of separations, as caregiving disruptions can make children feel that the world around them is crumbling. Indeed, the effects of separation are believed to vary based on the cognitive maturity of the child (Masten & Narayan, 2012). It should be obvious why the first years of life may be a particularly detrimental time to experience parent–child separation, as the child’s construction of their world is truly centered around their caregiver during this period (Bretherton, 1993). The outrage related to “tender age” shelters’ ability to care for detained infants and young children (Hartmann, 2018) indicates that many are aware that the child’s age may be an important moderator of the experience, effects, and recovery from separation. An understanding of infant psychology is sometimes limited in the lay public, public officials, and even among scientists, who point to infantile amnesia as evidence that early experiences do not matter (i.e., because the children lack the ability to provide explicit recall of events in the first years of life; for a discussion, see Cordón, Pipe, Sayfan, Melinder, & Goodman, 2004). In other words, there is a pernicious belief that if children cannot remember something, it must not affect them.

Although separation from a caregiver at any age is difficult, some researchers have called for greater appreciation of the impact of parent–child separation on adolescents (Pfeifer & Galvan, 2018). It has been postulated that adolescence represents an additional developmental sensitive period (Fuhrmann, Knoll, & Blakemore, 2015). Rapid changes in brain development during this stage may make this period unique in terms of plasticity and therefore responsiveness to the environment. If this is true, it is both moral and pragmatic to provide additional supports and protections for children of all ages, including adolescents separated from their parents, to take advantage of the ability to benefit from positive caregiving experiences in adolescence. Further evidence from the BEIP provides weight that placements in both early life and in adolescence affect functioning, as

children who remained in their foster families into adolescence fared significantly better in terms of psychopathology and brain function compared to those foster children who were disrupted from their placements (Humphreys et al., 2015; Vanderwert, Zeanah, Fox, & Nelson, 2016). Probing into the timing of adverse events, including parent–child separations, would be helpful to inform practice and policy for separated children and adolescents (as recent reports indicate that the more than 12,000 migrant children held in detention centers in the United States at the time of this writing are unaccompanied teenagers; Dickerson, 2018). Indeed, a consensus statement from 2014 by the American Orthopsychiatric Association affirmed that adolescents have the right to be raised in families and that group care should be avoided whenever possible (Dozier et al., 2014).

### Mechanisms

Although reducing unnecessary parent–child separations is an important goal, realistically, many children have experienced and will continue to experience such separations. Thus, another future direction is identifying potential treatment targets for the mitigation of such risks. Given that all behavior is brain mediated, such approaches may usefully consider metrics of brain structure and function (e.g., gray and white matter volume, and white matter tract development, task-based and resting functional magnetic resonance imaging and electroencephalogram). Additional targets of interest include the stress response system (both sympathetic and parasympathetic), systemic inflammation and inflammatory response, DNA methylation (including epigenetic clocks, methylome-wide, and targeted approaches associated with stress and cognition), and markers of cellular processes, including telomere length and mitochondrial DNA copy number. External mechanisms associated with post-separation outcomes include the quality of the caregiving environment as well as educational and neighborhood environments. Testing whether intervention remediates difficulties across multiple levels of analysis will be useful for identifying if such interventions are able to fully aid in recovery. Of course, individual-level characteristics (e.g., differential susceptibility) may be relevant to the study of both the impact of separation and responsiveness to intervention (Belsky & Pluess, 2009), as even some children with prolonged institutional care exposure appear to be functioning within typical limits in early adolescence (Humphreys et al., 2018).

### Cultural and Political Context

Cultural and political contexts likely affect decisions about parent–child separations, the alternative placements provided to separated children, the services provided for families in the midst of separation and following reunification, and the urgency in which separations are attended to.



Lack of paid family leave (Wisensale, 2015), changes in the social safety net for impoverished families (Tach & Edin, 2017), and work requirements to receive government aid (Moffitt, 2015) affect families and may contribute to maltreatment risk. Changing demographics (Pew Research Center, 2015) and the rise in White nationalism (Southern Poverty Law Center, 2018) may affect policies for children and families. It is hard to trust that a president who called Mexicans “rapists” (Scott, 2018) is guiding immigration-related decision making from an unbiased perspective. Actions that affect children and families are influenced by historical precedents, including a desire to right past wrongs. For one example, prior to 1865 it was common practice for enslaved children to be separated from their parents (Dunaway, 2003). This horrific legacy of parent–child separation has contributed to the formation of groups that have the goal of preventing transracial adoption of Black children into White families (National Association of Black Social Workers, 1972). Explicit consideration of the role of race and ethnicity in separation and placement decisions is needed to more fully understand how bias and discrimination continue to affect children. Well-intended policies may have resulted in making some groups of children more vulnerable to maltreatment. Callous “zero-tolerance” policies by administrations that had no plan in place for eventual parent–child reunification (Blitzer, 2018) continue to keep children from their parents as I write this. From a research perspective, we would benefit from taking a broader lens in considering how cultural and political contexts affect decision making in parent–child separation. Variation in cultural practices, including acceptability of children to care for younger siblings, unsupervised outdoor play, and the “free range” movement (Pimentel, 2012) merit further study as well. There are clear differences in the expectations for parents and for children across time and across cultures (e.g., whether children can participate in the workforce; Hindman, 2016). Values about reunification following immigration-related separation may also be culturally dependent, such that family structure, which parent was separated, and matrilineal versus patrilineal backgrounds affect the likelihood, length, and location of parent–child reunification (González-Ferrer, Baizán, & Beauchemin, 2012). As psychology becomes more attentive to diversity and cultural variation, researchers who study childhood adversity would benefit from collaborating with and incorporating perspectives of these experts in designing their study goals and measures, as well as making meaning of their findings within a broader context.

### Identifying the Needs of the Child

We know that children fare best in families, in which they have a parent or other caregiver. But what is it, specifically, that caregivers provide, and how can we better understand the unique function of, and variation in, caregiving? As

previously mentioned, a sole focus on instrumental care needs (e.g., good, shelter, clothing) does not serve children’s broader needs (Zeanah et al., 2006). Domain-specific approaches to caregiving have outlined the various ways in which caregivers aid in their children’s development (e.g., protection, reciprocity, control, guided learning, group participation; Grusec & Davidov, 2010). More recently, my colleagues and I (King, Humphreys, & Gotlib, 2018) have sought to further conceptualize how caregivers vary in what they provide to children (i.e., the environmental inputs that caregivers provide above and beyond instrumental care needs). We postulate and provide preliminary evidence (<https://plot.ly/~lucysking/5>) that children vary in both the amount of emotional and cognitive input they receive, and that each domain is moderated by caregiver sensitivity. Such an approach allows researchers to examine how parent–child separation affects the inputs children receive (e.g., reports that children in detention centers are not allowed to be touched indicate that low emotional input may be provided in these circumstances; Fetters, 2018), as well as link the types of interventions these children may be most in need of following separation. The use of both laboratory and in vivo observations of children’s environments can be helpful in this approach. In particular, harnessing technology to examine stimulation and contact with adults (e.g., the Language ENvironment Analysis [LENA]; Oetting, Hartfield, & Pruitt, 2009) can fill important gaps in knowledge about variations in children’s experiences as a function of their placement.

### Tailoring Services

Unsurprisingly, for children who experienced immigration-related separation from parents, locating service providers for appropriate psychological services, along with legal representation, represent high needs for this population (Baily, Henderson, Taub, Shea, & Verdelli, 2014; Ciaccia & John, 2016). For children separated due to validated cases of abuse and neglect, child welfare systems are not always organized and able to provide services or referrals for service (Glisson & Hemmelgarn, 1998). Thus, one major issue is locating mental health and social work services for children in need. Research on structural issues associated with linking practitioners with these children, as well as dissemination and implementation issues, are a necessity. A second issue involves identifying the appropriate assessment and treatments for these children. Assessments should be conducted by practitioners experienced with trauma who are aware of the clinical issues related to caregiver separation in young children (Zeanah, Berlin, & Boris, 2011) and, whenever possible, speak the child’s native language. Children, especially young children, are unable to independently provide clinicians with a full picture of how they are functioning, particularly when relationships form the foundation of the child’s life. Collateral interviews and observations with

children's caregivers are required to form a better understanding of the needs of each child. Researchers who aim to understand the implications of separation must work to incorporate the adults who care for these children in their assessments. It should be noted that decisions about placement and reunification in child welfare cases should be based off of a discerning review of the quality of the placement in terms of meeting the child's needs, which is not necessarily something that courts or child welfare agencies are able to do (Zeanah & Humphreys, 2018).

As for interventions, given that separation often constitutes a significant trauma for children, application of evidenced-based interventions, including trauma-focused cognitive behavioral therapies (Cohen, Mannarino, Berliner, & Deblinger, 2000; Scheeringa, Weems, Cohen, Amaya-Jackson, & Guthrie, 2011), may be warranted. As always, consideration of cultural context (e.g., the unique needs and perspectives of Hispanic families whose adolescents have experienced immigration-related separation; Mitrani, Santisteban, & Muir, 2004) should be explored with modifications to existing interventions as needed. Interventions aimed to foster the parent-child relationship (e.g., Child-Parent Psychotherapy: Lieberman, Van Horn, & Ippen, 2005; Attachment and Biobehavioral Catch-up: Dozier, Dozier, & Manni, 2002; or Circle of Security: Powell, Cooper, Hoffman, & Marvin, 2009), are appropriate for use with either a separated parent following reunification or foster parents who care for children during or post-separation. Given the different training needs, lengths, and empirical support for these approaches, a multiarmed trial comparing these available treatments would be an extremely valuable addition to the treatment literature.

Although parent-child separations are often outside of the control of parents, there are circumstances when parents have played a direct role leading to the separation (e.g., maltreatment). One exciting area of future research is on the prevention of child maltreatment. Consideration of the structural (e.g., poverty; Drake & Pandey, 1996) and individual caregiver-level characteristics (Belsky, 1993) provide important frameworks for guiding this research. Finding mutable targets (e.g., interpretations of children's behavior; Bugental et al., 2002; detection of child cues, psychoeducation about children's needs across development, and parents' own emotion regulation and stress coping) are important for advancing this work. Simple laboratory-based or online studies testing short-term interventions on these targets could be used to identify the most promising avenues for larger scale longitudinal work with at-risk populations.

## CONCLUSIONS

Children benefit from being in high-quality, stable, family care with a committed adult (Zeanah, Humphreys, Fox, &

Nelson, 2017). Particularly in early life, infants and young children are entirely dependent on caregivers to provide them stimulation and nurturance and to protect them from harm. Although there are moral, political, and cultural reasons to be examining the effects of parent-child separations today, for decades we have been seeking answers to how societies should support children without parental care. There are hundreds of thousands of children in the United States who are currently in foster care, and worldwide, there are an estimated 140 million orphans (UNICEF, 2017). Given the various reasons for parent-child separation (e.g., death, poverty, maltreatment, immigration), there are different risk factors, and outcomes, for these children. In some cases, separating children from their parents saves their lives (e.g., in cases of extreme abuse or neglect). However, removing children from safe, committed, and caring parents is likely to cause harm. Placement changes are likely to be disruptive of attachment relationships, and in all cases, a permanent home with a family who will love the child as if he or she were their own is preferable to temporary care. In addition, children have increased brain plasticity, and even after experiencing horrific events can recover and thrive. The environment and individual differences have a role to play in explaining subsequent functioning after a separation.

It is interesting to note that although the "zero tolerance" immigration policy was cited as an intended deterrent (Hirschfield Davis & Shear, 2018), parent-child separations may be counterproductive to this goal. Parents separated from their children due to immigration enforcement report an intention to return to the United States following deportation with a goal of reuniting with their children (Amuedo-Dorantes, Pozo, & Puttitanun, 2015). In other words, their love for their children motivated the seeking of safety and opportunities in a new country as well as the willingness to face detention to reunify with those separated children. Although as scientists we have a strong inclination to understand the impact of separation on children, and often pursue our work with the hopes that policymakers and government officials will use the products of our research to inform their decision making, the ability for our "science" to influence parent-child separation has not been established. Moral outrage perhaps should play a larger role than our research findings alone (Zeanah & Zeanah, 2018). That being said, deterring the use of institutional care for children may have been a consequence of research on abandoned children in Romania (the Romanian government passed a law in 2005 banning children younger than 24 months of age from being placed in institutions; Cojocaru, 2008) after the BEIP investigators presented their findings to government officials.

To move the field forward, we should read widely and collaborate with colleagues in other disciplines. An interdisciplinary perspective, including neuroscience, social work, public policy, education, demography, anthropology, and political science, would benefit our ability to better understand the structural, cultural, and political issues that

result in parent–child separation; to study the consequences of these separations; and to inform our ability to best serve parents and children affected. Mining existing data sources, collection of new data using developmentally sensitive assessments, and longitudinal approaches will help reach these goals more quickly. Thinking carefully about our statistical approaches, including how best to consider the child’s broader context, is essential for gaining a complete picture of the impact of parent–child separation.

## ACKNOWLEDGMENTS

I am grateful to Dr. Charles H. Zeanah, Ms. Lucy King, and Dr. Andres De Los Reyes for their thoughtful feedback on drafts of this article.

## FUNDING

This work was supported through an Early Career Research Fellowship (2017 1261 05) from the Jacobs Foundation.

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