The Pennsylvania State University

The J. Jeffrey and Ann Marie Fox Graduate School

# FOSTER PARENT PRIOR EXPERIENCE WITH CHILD BEHAVIOR PROBLEMS AND THE TIMING OF NON-PROGRESS MOVES FOR CHILDREN IN NON-RELATIVE FOSTER CARE PLACEMENTS: A SURVIVAL ANALYSIS APPROACH

A Thesis in

Human Development & Family Studies

by

Ann Shun Swanson



Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Master of Science

December 2024

The thesis of Ann Shun Swanson was reviewed and approved by the following:

Christian M. Connell
Professor of Human Development & Family Studies
Thesis Co-Advisor

Sarah A. Font
Associate Professor of Sociology & Public Policy
Thesis Co-Advisor

Abenaa A. Jones
Assistant Professor of Human Development & Family Studies

Douglas M. Teti
Distinguished Professor of Human Development & Family Studies
Department Head of Human Development & Family Studies

## ABSTRACT

Each year, nearly half of children in foster care are placed in non-relative foster families. Compared to children in kinship placements, children in non-relative foster care are more likely to have behavioral issues and more susceptible to experiencing multiple placements disruptions. This study sought to examine whether non-relative foster parents' prior experience with child behavior problems or co-fostering help from an additional foster parent have a protective effect when multiple children are fostered concurrently or children have known behavior problems. Longitudinal administrative data and survival analysis were leveraged to test a series of two-way interactions between these specific risk and protective factors and examine their impact on the timing of non-progress moves. The sample comprised 1607 non-relative foster care placements beginning between January 2012 and December 2016, involving 661 non-relative foster parents and 960 children aged 6-17 years old. Contrary to expectations, results indicate that the presence of an additional foster parent does not interact with the number of children fostered concurrently nor the presence of child behavior problems to impact the timing of non-progress moves. Nevertheless, a key finding from this study suggests that non-relative foster parents' prior experience with child behavior problems has a protective effect and increases placement duration before a non-progress moves occurs for children who were previously removed for behavioral issues or placed in congregate care or a psychiatric hospital. Results from this study offer valuable insights with implications for both research and practice. Notably, enhanced efforts to support and incentives to retain experienced foster parents may increase placement stability for foster children, particularly for older children with behavioral issues.

**TABLE OF CONTENTS**

## LIST OF FIGURES

## LIST OF TABLES

## ACKNOWLEDGEMENTS

I would like to express my deepest gratitude to Sarah Font for her exceptional mentorship, unwavering support, and invaluable critical feedback, all of which have been instrumental in shaping my academic growth. Her patience, encouragement, and guidance were indispensable in helping me navigate the challenges associated with this project and giving me the confidence to complete this important milestone. I am also indebted to Christian Connell for all the time spent supporting and advising me these past few years. It has been an honor to collaborate with him and benefit from his expertise on a wide range of research projects, which enabled me to develop valuable research skills. I would like to also extend my heartfelt appreciation to Abenaa Jones for her willingness to step in and provide insightful input. Lastly, I would like to thank my husband for his love, support, and understanding. His steadfast belief in my potential and his willingness to shoulder additional responsibilities have been the cornerstone of the completion of this thesis.

# Chapter 1

## Background

Approximately 6% of all U.S. children are placed in foster care (FC), a court-monitored system designed to provide temporary care for children removed from unsafe home environments, before reaching the age of majority (Wildeman & Emanuel, 2014). In 2021, the FC system served an estimated 606,031 children (U.S. Department of Health & Human Services, 2023).

### Implications of foster care placement disruptions for child wellbeing

Past research has broadly defined placement disruptions as the premature and unplanned termination of a current foster care placement (Harkin & Houston, 2016; Konijn et al., 2019; Oosterman et al., 2007; Rock et al., 2015; Tonheim & Iversen, 2019) due to negative reasons, such as a mismatch between children and their foster family (Chamberlain et al., 2006; Vanderfaeillie, Goemans, et al., 2018). Experiencing multiple placement disruptions, known as placement instability, alters children's microsystem through disruption of relationships, education, and services (e.g., separation from primary caregivers, siblings, and relatives; loss of friends and potential learning gaps due to frequent school changes) as well as rapid expansion of social and support networks (e.g., new home environment, caregivers, teachers, and providers; addition of caseworkers, court appointed special advocates, attorneys) and impacts children's mesosystem by requiring different stakeholders (e.g., foster family, biological parents, child welfare agency, healthcare providers, etc.) to reach a consensus on what is in the best interest of the child and coordinate efforts accordingly (Bronfenbrenner, 1979; Johnson et al., 2020; Richardson et al., 2018).

Placement disruptions are associated with a host of adverse outcomes on children's development such as low academic achievement (Cassarino-Perez et al., 2018; Font, 2014) or a higher risk of juvenile delinquency (Ryan & Testa, 2005), and multiple experiences of placement disruptions can have compounding adverse effects on foster children's life trajectories. Additionally, placement instability can decrease the likelihood that foster youth will follow a healthy normative pathway to adulthood (Arnett, 2007). Although rates of psychiatric disorders are generally higher among foster children compared to the general youth population (McMillen et al., 2005), children who experience multiple placement disruptions tend to exhibit even higher rates of psychological or behavioral issues (D'Andrade, 2005), up to 63% higher than those of foster children who did not experience multiple placement disruptions (Rubin et al., 2007). Moreover, the likelihood of internalizing and externalizing symptoms increases with the number of placement disruptions, irrespective of the presence of the presence of prior behavioral issues (Ryan & Testa, 2005). Placement instability can also exacerbate existing child behavioral problems, leading to an increased probability of subsequent disruptions and post-permanency discontinuities such as guardianship dissolution and FC reentry following adoption (Chamberlain et al., 2006).

## Differentiating placement disruptions from non-progress moves

Given the adverse consequences of placement disruptions on foster youth, they have been used as outcome variables in numerous prior studies (Connell et al., 2006). However, the construct of placement disruption lacks consistent operationalization across extant scientific literature. This inconsistency may stem from the fact that placement disruptions likely result from complex processes rather than isolated events (Khoo & Skoog, 2014), which make it difficult to capture the multiple facets of this construct.

Placement disruptions have also been referred to as failures, transfers, moves, breakdowns, shifts, and changes (Harkin & Houston, 2016). A meta-analysis by Oosterman et al.

(2007) indicates that these disruptions have also been defined differently across studies. One common approach to measuring disruptions has been to count any move as a disruption regardless of other factors such as placement end reason or subsequent placement setting (Font & Kim, 2022; McGuire et al., 2018). Some researchers employ additional indicators of placement disruption, such as the duration of children's first FC placement or the time until a move occurs (Font et al., 2018; Vreeland et al., 2020). Another approach involves assessing whether conditional criteria are met. For instance, some studies focus on specific placement settings and define placement disruptions as moves to psychiatric hospitals, emergency shelters, and detention centers (Leathers, 2006; Noonan et al., 2009). More recent research has examined caseworker-recorded placement end reasons in addition to placement settings and operationalized disruptions as non-progress moves when children are placed in an equally or less restrictive setting, such as a move from family-based FC to a residential treatment facility (Font et al., 2018). Throughout this paper, "disruptions" will be used as an inclusive term to denote placement disruptions more broadly while "non-progress moves" will specifically refer to moves that are not to policy-preferred or less restrictive settings, fail to bring children closer to permanency, or disrupt prematurely.

There are numerous reasons why non-progress moves may occur (Sattler et al., 2018). Unlike disruptions stemming from proactive placement decisions (e.g., placement with siblings or pre-adoption placement), non-progress moves are typically reactive in nature and often arise from negative circumstances. For instance, some non-progress moves may be child-initiated when a child runs away from a placement or engages in behaviors putting themselves or others at risk, prompting the FC placement agency to transfer children to more restrictive settings (e.g., residential treatment center or psychiatric hospital) who can provide increased supervision and a higher level of care. Additionally, some non-progress moves may be agency-initiated irrespective of foster parents' preferences when they provide substandard care or fail to meet the requirements (e.g., background check or completion of pre-service training) and adhere to the regulations (e.g., environment safety and compliance with visitations) mandated by the licensing

agency. Furthermore, some non-progress moves may result from a placement mismatch when children's medical, behavioral, or disability-related needs exceed foster caregivers' skills and resources. Moreover, non-progress moves are often initiated by foster parents (Koh et al., 2014). For instance, foster parents may have biological children living in the house, potentially leading them to prioritize their own children's safety and wellbeing over that of disruptive foster youth (Brown & Bednar, 2006; Tonheim & Iversen, 2019). Foster parents may also experience dissatisfaction with the FC agency due to lack of support, poor communication, or inadequate financial resources (Hanlon & Feltner, 2021; Tonheim & Iversen, 2019), as well as feelings of powerlessness in pivotal decision-making processes. Moreover, foster parents experience high rates of parenting and secondary traumatic stress (Dowdy-Hazlett & Clark, 2024) or face challenging life events unrelated to the child or the agency (e.g., personal illness or job loss), which can lead to burnout. Nevertheless, catalysts for non-progress moves can be cumulative and can stem from one or more stakeholders (e.g., child, foster parent, FC agency) and the dynamic relationships between them (Taylor & McQuillan, 2014).

## Non-relative foster parents

In Rhode Island, the state providing data for this study, non-relative foster parents (NRFPs) are defined as caregivers who are unrelated to children by blood, adoption, or marriage and are licensed by the state to offer substitute care to children who have been removed from their home. Non-relative foster care (NRFC) is used when children cannot be placed with relatives or fictive kin—adults, such as neighbors or teachers, who share personal and emotional ties to children or their biological family (*2020 Foster Care Redesign Frequently Asked Questions (FAQs): Glossary of Terms*, n.d.).

Each year, nearly half of children in FC are placed with NRFPs (U.S. Department of Health and Human Services, 2023). The Family First Prevention Services Act of 2018 emphasizes placing foster children in the least restrictive and most family-like setting (Lindell et

al., 2020; Ryan & Testa, 2005) and considering the substantial number of foster children placed with NRFPs, it is essential to address the challenges they encounter, particularly regarding placement stability. Compared to children in kinship placements, children in NRFC are more susceptible to experiencing multiple placements disruptions (Chateauneuf et al., 2022; Connell et al., 2006; Konijn et al., 2019; Sattler et al., 2018).

From a life course and ecological systems perspective, NRFPs often become a central and sometimes permanent part of children's microsystem following non-normative ecological transitions (e.g., removal from home), thus serving as important influences in the lives of foster children and playing an essential role in their healthy development (Bronfenbrenner, 1979; Elder, 1998). Structural functionalism also offers a valuable framework for understanding the importance of foster caregivers in children's lives (Pratchett & Rees, 2017). NRFPs can be viewed as vital social institutions whose developmentally-influential role often includes providing multidimensional support (e.g., economic, instrumental, emotional) and socializing children with societal norms to help them become active and productive members of society.

Yet, the number of children entering the FC system annually greatly exceeding the availability of licensed non-relative foster homes (Doyle & Peters, 2007). For instance, during this study's observation period (2012-2017), the number of foster children in Rhode Island increased by 7%, while the number of available placements with NRFPs decreased by 12% (Greeson et al., 2021). Moreover, the tendency of NRFPs to prefer younger children lead to a persistent shortage of NRFPs for older youth, especially those with complex medical or behavioral needs (U.S. Government Accountability Office, 2015, 2018). This problem is further compounded by challenges in recruiting new and retaining experienced NRFPs (Colton et al., 2006; Hanlon & Feltner, 2021)—two critical issues for the FC system. Difficult fostering experiences can also negatively impact recruitment efforts considering the influential power of word-of-mouth in such endeavors (Hanlon & Feltner, 2021). Moreover, roughly half of prospective NRFPs fail to complete their pre-service training (K. W. Rhodes et al., 2003), and half of those who do obtain a

license cease to foster within the first six to twelve months (Findley & Praetorius, 2023; Hamilton, 2011).

### Child mental and behavior issues: A core challenge for non-relative foster parents

Foster children are up to 6 times more likely than the general youth population to have mental and behavioral issues (Engler et al., 2022; Turney & Wildeman, 2016; Vasileva & Petermann, 2018) due to increased rates of exposure to adverse childhood experiences (Turney & Wildeman, 2017; Vig et al., 2005). The prevalence of such problems among the FC population is also high, with almost 50% of foster children experiencing some form of mental or behavioral issue (Palmer et al., 2024). Children with more severe mental and behavioral issues are generally less likely to be placed with kin (Font, 2014; Jedwab et al., 2020). As a result, internalizing and externalizing child problem behaviors, which are known to increase foster parent stress (Goemans et al., 2018), are more prevalent in NRFC. In fact, given their role in increasing caregiver strain and parenting stress (Leathers et al., 2019; McKeough et al., 2017; Rock et al., 2015), problem behaviors emerge as one of the most cited reason for placement disruptions (Carnochan et al., 2013; Courtney, 2011; Crum, 2010; Koh et al., 2014).

Approximately 1 in 5 children in family-based foster care placements exhibit severe behavioral issues, leading them to be placed in congregate care (e.g., group homes, maternity homes, or residential treatment centers) at some point before exiting the FC system (Palmer et al., 2020). Foster youth who cannot remain in family-based settings due to acute behavioral needs—such as suicidal ideation (Engler et al., 2022), substance use disorders (Moss et al., 2020), or a combination of both (Jones et al., 2023) —often end up in these more restrictive settings. This pattern is especially true for older children. While placement in such residential settings can initially have positive effects, prolonged stays can be detrimental to children's functioning (Strickler et al., 2016) and worsen existing internalizing and externalizing problem behaviors (Li et al., 2019). However, congregate care is intended as a temporary stabilization

setting, with the expectation that children will transition back to family-based homes. These transitions can be challenging for NRFPs who may lack the resources to manage reoccurring behavioral issues, leading them to request the removal of children from their care and negatively impacting placement stability. Mental and behavioral issues pose a significant challenge for NRFPs and contribute to high turnover rates. As a result, the pool of available NRFPs is likely to be inexperienced and less equipped to address the complex mental and behavioral needs of foster youth (Vig et al., 2005).

## Non-relative foster parents: Known risk and protective factors associated with disruptions

While most NRFPs provide high quality care to the children they foster, certain foster parent characteristics have been associated with a higher or lower likelihood of placement disruptions. Given the dearth of research specifically focused on NRFPs, many of the predictors of placement stability listed in this section are not specific to NRFPs and apply to a broader range of foster parenting types, including kinship and therapeutic FC.

### Motivations to foster children

NRFP can have various reasons underlying their willingness to foster a child, which De Maeyer et al. (2014) have broadly categorized as society-oriented, child-oriented, and parent-oriented. NRFP motivations are important to consider because they may influence both placement stability and foster parent retention. For instance, NRFP may be less likely to continue fostering a child with severe behavioral issues if they only have self-oriented motivations (e.g., expecting the child to alleviate feelings of loneliness) compared to NRFP who are driven primarily by child-oriented motivations (e.g., wanting to provide a safe and stable home for a child in foster care).

Some NRFP may endorse altruistic society-oriented motivations such as awareness of the large number of children currently in the foster care system and pressing community need for foster caregivers or wanting to contribute more broadly to the betterment of society (Baer & Diehl, 2019; Daniel, 2011). Some NRPF may hold more child-oriented motivations such as wanting to help children in need, wanting them to feel loved, and providing a positive family environment or permanent home (MacGregor et al., 2006; K. Rhodes et al., 2006). NRFP may also have numerous different self-oriented motivations, which are usually associated with the anticipation of beneficial outcomes. For instance, NRFP may wish to expand their family, be unable to conceive a child, view foster care as a pathway to adoption, identify with foster children due to similar personal experiences, or feel that they are following their religious/spiritual calling (Baer & Diehl, 2019; Daniel, 2011). However, some self-oriented motives such as wanting to feel loved and needed by a child, simply wanting company, using foster care as a parenting trial period, and hoping that a child will make their life more meaningful or provide a sense of self-fulfillment have been associated with less desirable placement outcomes (De Maeyer et al., 2014; MacGregor et al., 2006; K. Rhodes et al., 2006).

**Number of children fostered concurrently**

According to family systems theory (Hill, 1949), the addition of a new child to the household can engender a period of disequilibrium, requiring all members to adjust to changes in rules, expectations, roles, and relationships (Minuchin, 1974). Failure to reestablish homeostasis after welcoming a new foster child can heighten the risk of placement disruption (Lanigan & Burleson, 2017). Furthermore, a meta-analysis by Oosterman et al. (2007) and a systematic review by Rock et al. (2015) indicated a positive association between the presence of other children and the risk of placement disruption. Leathers et al. (2019) reported that the perceiving foster children as a risk to other household members is linked to more challenging parenting experiences, which is a strong predictor of disruption.

Compared to kinship caregivers, NRFPs are also more likely to foster multiple non-sibling children concurrently (Noonan et al., 2009). Caring for three or more foster youth simultaneously has been associated with a greater risk of disruption (Chamberlain et al., 2006) that can be attributed to several factors, including the higher potential for problem behaviors and conflicts between children, increased responsibilities related to medical appointments and school commitments, and the challenge of equitably sharing love and attention (Lanigan & Burleson, 2017). Fostering multiple children concurrently also intensifies caregiver strain and parenting stress for NRFPs (McKeough et al., 2017), which may lead to less sensitive parenting practices—a key risk factor for placement instability (Konijn et al., 2019).

**Prior caregiving experience**

Placement disruptions in foster care often arise due to child behavior problems, placement mismatches, or children requiring a higher level of care. These underlying issues highlight a discrepancy between the mental and behavioral of foster youth and the ability of NRFPs to manage these behaviors (Khoo & Skoog, 2014). Behavioral issues are likely to challenge both NRFPs' commitment and competency (Konijn et al., 2019), increasing both the risk that NRFPs may resort to harsh, coercive, and sometimes abusive discipline practices as well as the chance of disruption for children placed with new, inexperienced, or underprepared NRFPs (Crum, 2010; Konijn et al., 2019; Rock et al., 2015; Taylor & McQuillan, 2014). To minimize the risk of disruptions, it is crucial to ensure a more adequate fit and reduce the gap between NRFPs' parenting skills and foster children's needs (Redding et al., 2000; Vanderfaeillie et al., 2020). Belsky's (1984) process model suggests that NRFPs' personal resources, including skills acquired through prior child rearing experiences, are more effective at buffering against the influence of parenting stress than child characteristics or receipt of social support.

**Co-fostering support from an additional caregiver**

Prior research highlights that children from single-parent households tend to have substantially lower annual earnings in adulthood (Bloome, 2017; Lopoo & DeLeire, 2014) and that transitions from a two-parent to a single-parent household are adversely associated with academic achievement and adult mental health (Lee & McLanahan, 2015; Magnuson & Berger, 2009; McLanahan et al., 2013). The presence of an additional NRFP constitute a valuable form of intrafamily social capital (e.g., increased emotional support, instrumental assistance, and financial resources) and the availability of additional support may work to bolster self-efficacy, increase parenting satisfaction, and help NRFPs navigate the challenges—both real and perceived—inherent to fostering, such as handling foster youth problem behaviors (Cooley et al., 2019; Stenason & Romano, 2023; Vanderfaeillie et al., 2020; Whenan et al., 2009). Additionally, receipt of social, instrumental, and emotional support have been extensively studied and consistently linked to placement stability (Leathers et al., 2019), with higher levels of parenting support promoting more stable placements (Miller et al., 2019). In light of research supporting the mitigating effect of various forms of parenting support on the risk of experiencing multiple placement disruptions (Crum, 2010) and the well-established benefits of two-parent households on child development and adult outcomes (Wen, 2022), it seems reasonable to assume that foster children may experience more stable placements when placed with co-fostering NRFPs.

**Non-relative foster parent age and race**

Research on the impact of foster parent age and race/ethnicity on placement stability reveals somewhat contradictory findings. (O'Neill et al., 2012) initially found that older caregiver age may decrease the likelihood of multiple placement disruptions, but more recent findings produced contrasting estimates suggesting that older foster parent may potentially increase the risk of disruption instead (Platt & Gephart, 2022). On one hand, older foster parents may

contribute to more stable placements because their lives are more likely to be established. For instance, they may have accumulated more financial resources, completed their education, secured stable employment, purchased a home, and settled down. Another reason may be that they have accumulated more child rearing experience through raising biological children or previously caring for foster children. On the other hand, younger foster parent age may also promote placement stability in certain circumstances. For example, as children enter adolescence—a developmental period characterized by identity exploration—they may feel more supported and understood by younger foster parents who are more likely to be accepting of and intertwined with today's youth culture. In other words, it may be easier for younger foster parents to build rapport and trust with foster youth due to their ability to more closely relate to the experiences, interests, and concerns of this younger generation.

Prior research also points to the existence of disparities in placement stability based on foster parent race and ethnicity. Findings from several research studies suggest that children placed with Black foster parents are more likely to experience multiple disruptions (Leathers et al., 2019; O'Neill et al., 2012; Platt & Gephart, 2022). Implicit bias, structural inequities, and systemic barriers within the child welfare system may contribute to this phenomenon by creating unequal access to resources or services. A recent study also found that racial matching between foster parent and child can slightly mitigate the likelihood of multiple placement disruptions (LaBrenz et al., 2022). This marginal protective effect may result from increased cultural understanding, competence, and sensitivity, as well as stronger racial/ethnic social connections and deeper awareness of community-based resources and services dedicated to serving this population without prejudice or bias. However, the benefits of racial matching on placement stability were not observed in cases involving behavioral issues.

## Foster children: Known risk and protective factors associated with disruptions

Given the multitude of negative outcomes associated with placement instability, scholarly literature has dedicated considerable attention to identifying which child characteristics are associated with an increased risk of placement disruptions.

### Behavior problems and disability

As mentioned previously, children placed with NRFPs often present with more behavioral issues than children in relative placements (Chateauneuf et al., 2022). Moreover, research suggests that not only the presence but also the severity and number of problem behaviors significantly predict placement disruptions (Fisher et al., 2011). Some of the most challenging behaviors reported by foster parents include externalizing (e.g., aggression, violence), self-harming (e.g., substance use), and inappropriate sexual behaviors (Adams et al., 2018b; Taylor & McQuillan, 2014). Findings pertaining to child mental, physical, and developmental disabilities were mixed. A few studies found disability status to be a statistically significant factor contributing to placement instability (Jedwab et al., 2020; Platt & Gephart, 2022), while other studies have found no such association between child disability and the risk of multiple placement disruptions (Oosterman et al., 2007; Sattler et al., 2018).

### Case and placement characteristics

A history of maltreatment (Konijn et al., 2019), especially one involving multiple maltreatment types (Stenason & Romano, 2023), has been consistently linked to a higher risk of disruption. However, the predictive nature of specific maltreatment types presents a more nuanced picture, with mixed findings across extant literature. Some studies indicate that exposure to abuse—particularly experiences of emotional abuse (James et al., 2004) rather than physical

abuse, sexual abuse, or neglect (Carnochan et al., 2013; Eggertsen, 2008)—are associated with an increased likelihood of disruption. However, recent findings by (McGuire et al., 2018) challenge this notion, suggesting that all maltreatment types are equally predictive of multiple placement disruptions. Additionally, children who have experienced a greater number of previous foster care placements are at greater risk of subsequent disruptions (Connell et al., 2006; Oosterman et al., 2007). Service type also influences the likelihood of disruption, with placements in group homes and residential settings (Font et al., 2018; Stenason & Romano, 2023) carrying an increased risk compared to family-based settings (Oosterman et al., 2007; Rock et al., 2015).

### Child age, race, and gender

The relationship between child age and placement stability is complex and varies across studies. While several studies found that older child age at initial placement is associated with a higher risk of placement breakdown (Rock et al., 2015; Vanderfaeillie, Van Holen, et al., 2018), recent research found that younger age at time of first placement had a similar effect on the likelihood of placement disruptions (Stenason & Romano, 2023). These contradictory findings may imply that age does not individually predict placement stability and suggest a more complex interplay between age-specific and individual characteristics in influencing the risk of placement disruption. Similarly, studies investigating the association between child race/ethnicity and placement disruptions have yielded inconsistent results, with race/ethnicity being a statistically significant factor for placement stability in some studies (Liming et al., 2021; Sattler et al., 2018) but not in others (Eggertsen, 2008; Konijn et al., 2019).

## Research questions and hypotheses

The body of research dedicated exclusively to NRFPs and placement stability is limited and, to the best of my knowledge, no studies have investigated how specific foster parent

resources, such as the presence or absence of additional caregivers or children in the household, and prior experience caring for children with behavioral issues, interact to influence the risk of placement disruption. This research study leverages longitudinal data on foster youth and licensed NRFPs to answer the following research questions:

**Research question and hypothesis #1**

Does the presence or absence of an additional NRFP interact with the number of children fostered concurrently to predict the timing of placement disruptions? I hypothesize that placements with an additional NRFP will take longer to disrupt because co-fostering NRFPs will benefit from additional emotional support and increased access to financial and instrumental resources, such as child care assistance. Conversely, I predict that fostering more children concurrently will shorten time to placement disruption based on the assumption that strain and stress associated with the responsibility of caring for multiple children, coupled with the potential for conflicts stemming from negative emotional dynamics between children (e.g., competition for attention or jealousy among foster children). Additionally, I anticipate that the benefits of co-fostering will mitigate the caregiving burden associated with fostering multiple children. Consequently, I posit that the presence of an additional NRFP will delay the onset of non-progress moves for placements involving more than one foster child.

**Research question and hypothesis #2**

Does the presence or absence of an additional NRFP interact with the presence or absence of child behavior problems to predict the timing of placement disruptions? I hypothesize that co-fostering help from an additional NRFP will mitigate the risk of disruption for children with known behavioral issues and result in increased time in placement before the occurrence of a non-progress move. Building on the premise outlined in my previous hypothesis, the availability of

additional emotional, instrumental, and financial support can empower NRFPs to more effectively navigate the challenges associated with fostering children with behavioral issues. Greater fostering support will offset the negative impact of caring for such children by providing access to additional coping mechanisms, shared responsibility in managing behavioral challenges, and the ability to utilize external resources and services that might not be readily covered by insurance or affordable for a single NRFP's salary. By leveraging these supplementary resources, NRFPs may be better equipped to provide comprehensive care and support to foster youth with behavioral issues, thereby increasing time to placement disruptions.

**Research question and hypothesis #3**

Does the presence or absence of prior NRFP caregiving experience with behavioral issues interact with child behavior problems to predict the timing of placement disruptions? I hypothesize that prior NRFP experience with behavior problems will increase the time children spend in the same placement before they experience a disruption because it will enhance NRFPs' ability to provide stable placements and more nurturing environments to children with behavior problems. This assumes that NRFPs who have previously cared for children with known behavioral issues are likely to possess a deeper understanding of effective parenting strategies and authoritative parenting skills. Moreover, they are more likely to have evaluated their expectations and assessed their personal limitations, as well as their readiness to handle difficult behaviors and willingness to continue fostering children with problem behaviors.

# Chapter 2

## Methods

### Data

In 2013, the Rhode Island Department of Children, Youth, and Families (RI DCYF) received a federal grant (A Family For Every Child!) from the Administration for Children and Families to fund a 5-year Diligent Recruitment Initiative aiming to enhance the recruitment and retention of kinship, non-relative, and adoptive families to improve permanency outcomes for children in care. During the study period, several activities were underway including standardization of the licensing process (e.g., initial contact, 30h pre-service training, background check, home study) and implementation of the Trauma Informed Partnering for Safety and Permanence – Model Approach to Partnerships in Parenting (TIPS-MAPP) pre-service training curriculum.

For this research study, approval was obtained from Penn State's Institutional Review Board to utilize data sourced from two distinct de-identified and restricted files spanning FC records from 07/01/2011 to 06/30/2017. Data were extracted from the Rhode Island Children's Information System (RICHIST)—the centralized database used by RI DCYF to manage all information associated with child welfare and FC service delivery. The final dataset was constructed by linking data from the foster parent licensure extract to the child placement file using unique RICHIST-assigned provider identifiers. Each dataset entry corresponds to a unique placement-week and contains placement-specific foster parent and child demographic information (i.e., age, sex, race/ethnicity), alongside details about children's placement history (e.g., prior placements in congregate care or psychiatric hospitals) and case characteristics (e.g., removal reasons).

**Foster parent extract**

The foster parent extract contains demographic (month/year of birth, gender, race/ethnicity, family structure, number of biological children) and licensure data. Each record represents a distinct licensing period delineated by unique start and end dates. This data extract encompasses a comprehensive array of license-specific details, such as status (active, expired, inactive, pending), type (adoption, child-placing agency FC, relative FC), designation (e.g., adoption, child-specific, emergency/respite, court-ordered, general placement), action taken (e.g., approve, close, place on hold, reactivate, revoke), and reason behind these actions (e.g., adoption, difficult recent placement, licensing violation, voluntary). It also contains additional insights, such as the number of open requests, documentation of prior placement refusals, and binary indicators of foster parent openness to and refusal of specific child characteristics (e.g., 11-18 age range, behavioral issues, medical condition).

**Child placement extract**

The child placement extract contains comprehensive data about children's demographic characteristics (month/year of birth, gender, race/ethnicity, biological and caretaker family structure), placement history, and case characteristics. Each record represents a single placement within children's broader FC history and is attached to a unique start and end date—with the latter being omitted if the child is still in the same placement. This extract comprises a wealth of placement-specific details such as payment rate, removal manner (voluntary, 48h/72h hold, court-ordered), plan goal (e.g., adoption, guardianship, maintain in home, reunify with parents), service type (e.g., emergency shelter, non-relative FC, court-ordered relative FC, group home, psychiatric hospital), and placement end reason (e.g., child needs higher level of care, child's behavior problem, placement closer to home, placement in less restrictive setting, placement match problem). It also includes discharge reasons (e.g., adoption, guardianship,

AWOL, emancipation, reunification with biological parents), information concerning the settings to which children are discharged (e.g., relatives, independent living, single female, married parents, military service, substance abuse facility), and case-specific details such as the number of placements and removals to date, prior adoption status (unable to determine, international adoption, U.S. adoption) or termination of parental rights, and binary indicators for all removal reasons tracked by the Adoption and Foster Care Reporting System (AFCARS) such as abuse, neglect, child behavioral problems, parental incarceration, and abandonment.

## Sample

The initial sample consisted of 1885 foster care placements beginning between 01/01/12 and 12/31/2016 involving 860 licensed NRFPs and 1127 children aged 6 to 17 years old. During the sample selection process (Figure **2-1**), placements missing key foster parent license or demographic characteristics (n=278) were excluded. The final sample comprised 1607 general placements with NRFPs, involving a total of 661 NRFPs and 960 children. Given the median non-relative placement duration of 25 weeks (equivalent to 5.7 months), all NRFP placements included in the final sample were tracked for a period of at least 6 months to allow sufficient time to capture potential disruptions.

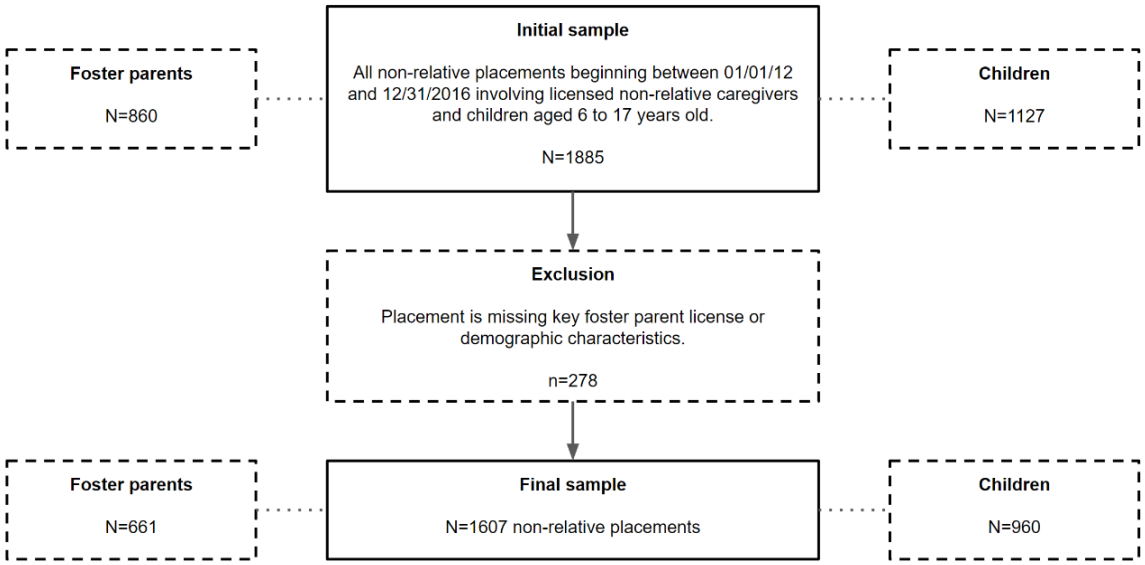


Figure **2-1**: Sample selection process with inclusion and exclusion criteria.

## Measures

### Outcome

This study focused on a specific type of placement disruption referred to as “non-progress” moves. Based on previous work by Font et al. (2018), non-progress moves are moves that are not to policy-preferred or less restrictive settings, fail to bring children closer to permanency, or disrupt prematurely. Treating all non-progress moves the same based on subsequent placement setting would likely obscure potential differences between moves to more permanent settings and moves resulting from deteriorating conditions. Therefore, a combination of placement end reasons and subsequent service type were used to identify non-progress moves. Several discrepancies between the end reason and discharge reason of individual placements revealed high variability in how caseworker recorded these fields. Thus, ensuring temporal ordering of placements, subsequent service type was deemed more reliable and was used as the primary method of identification. Placement end reasons were used to supplement

certain coding decisions and analyses testing the sensitivity of the measure were conducted by comparing the coefficients obtained with different ways to operationalize non-progress moves.

For the purpose of this study, non-progress moves were defined as any move to a temporary setting (e.g., move from NRFC to an emergency shelter) or more restrictive setting (e.g., move from NRFC to a group home) irrespective of placement end reason, as well as any lateral move to equally restrictive settings (e.g., move from one NRFP to a different NRFP) unless attached to a positive placement end reason (e.g., adoption, guardianship, move to less restrictive setting, placement closer to home). In other words, non-progress moves were coded as 1 if the subsequent placement had a higher level of restrictiveness. Lateral placement changes to equally restrictive settings were also coded as non-progress moves, unless they originated from kinship or NRFC settings and were terminated for positive reasons. When expanded at the week level, only the final week of a placement could be coded as a nonprogress move.

**Time-varying risk and protective factors**

Several binary AFCARS indicators were manually combined and carried forward across placements to identify children whose removal reason involved behavior issues. These indicators included behavioral problems, child drug and alcohol abuse, and child disability. Moreover, the number of additional children fostered concurrently was assessed at the outset of each week of placement. The presence or absence of an additional NRFP (although not time-varying) was also used as one of the main predictors. Prior caregiving experience with behavior problems was operationalized by determining whether NRFPs had previously cared for a child who was removed for behavior issues or placed in more restrictive settings. Specifically, NRFPs' prior experience was assessed by comparing the start date of each placement to the earliest date—if any—at which foster parents had either cared for a child who had ever been removed for behavior problems or was previously placed in congregate care or a psychiatric hospital. If NRFPs had experienced one or both of these events before the start of the current placement,

prior experience was coded as 1. NRFPs' prior experience was tracked for a period of at least 6 months preceding NRFPs' first eligible placement. All placements starting during the 6-month window preceding the start of the main observation period were used to capture prior NRFPs' experience with behavior problems but were not included in the final sample. Figure **2-2** provides a visual representation of the different observation periods and provides specific date ranges for each one.


Figure **2-2**: Breakdown of observation periods.

**Non-relative foster parent covariates**

Time-varying NRFP covariates included dummy variables (0 = no, 1= yes) indicating whether they were previously licensed for at least 52 weeks, were only licensed for general placements, and had their license placed on hold or revoked due to investigated or indicated child abuse and neglect (carried forward across placements). Static NRFP covariates were sex (0 = female, 1 = male), race/ethnicity (1 = White, non-Hispanic; 2 = Black, non-Hispanic; 3 = other

racial/ethnic minority group; 4 = Hispanic) and age at the start of each placement (continuous value rounded to the nearest integer).

### Child covariates

Time-varying child covariates included the number (continuous) of previous placements and prior removals to date, as well as dichotomous indicators (carried forward across placements) controlling for whether children had a prior removal involving physical or sexual abuse or stayed in an emergency shelter for more than 4 consecutive weeks. Static child covariates included sex (0 = female, 1 = male), race/ethnicity (1 = White, non-Hispanic; 2 = Black, non-Hispanic; 3 = other racial/ethnic minority group; 4 = Hispanic), and age group at the start of each placement (6–10, 11–13, and 14–17 years old). Year of removal and year at placement start were also added as covariates to control for potential external factors such as policy changes and within-system conditions such as recruitment efforts and availability of placements.

## Analytical approach

Survival analysis was selected as the appropriate statistical method due to its capability to consider the entire duration in which foster care placements are susceptible to disruption. This method accommodates scenarios where some children may remain in their placements without experiencing any moves throughout the observation period. Additionally, survival analysis accounts for the dynamic nature of the risk of non-progress moves, which may fluctuate over time. All statistical analyses were performed using Stata (version 18.0). The dataset was prepared for time-to-event analysis by using the *stset* command. The occurrence of a non-progress move was set as the failure event and children were considered at risk of non-progress move at the start of each new NRFP placement. Right censoring occurred if a non-progress move was not observed by the conclusion of the main observation period or if an alternate event was

experienced (e.g., progress move or discharge). In cases of the latter, the risk of placement disruption resumed at the start of the next NRFP placement, provided one was recorded before the end of the main observation period. Non-progress moves were first modeled using Cox proportional hazards regression, but assessment of correlation coefficients between scaled Schoenfeld residuals and the time function generated by the *phtest* command indicated violation of the proportionality assumption for several variables, as well as for the global test. Consequently, parametric single-failure survival models were conducted using *streg*. Various distributions (i.e., Gompertz, Weibull, log-logistic, log-normal, and exponential) were evaluated using Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) to identify the best-fitting model. Based on the lowest AIC and BIC values, the log-normal emerged as the optimal fit for model estimation. To adjust for placement interdependency (i.e., a child may have multiple placements) and multilevel interdependence (i.e., multiple children may share the same placement), the *vcemway* module (Gu & Yoo, 2019) was used to cluster standard errors by child ID and NRFP ID, thereby enhancing robustness. Non-progress moves were analyzed in four distinct accelerated failure time models, each incorporating the same set of predictors and covariates. Model 1 was a no-interaction model and served as baseline comparison. Model 2 included a two-way interaction between the presence of an additional NRFP and the number of children fostered concurrently. Model 3 included a two-way interaction between the presence of an additional NRFP and child behavior problems. Model 4 included a two-way interaction between NRFPs' prior experience with behavior problems and child behavior problems. Each model produced exponentiated time ratios (TR). In the context of this study, a TR > 1 can be interpreted as longer time to non-progress moves (i.e., a more stable placement), whereas a TR < 1 suggests that a placement disrupted sooner. It should be noted that interaction terms are not interpreted directly; instead, they modify the coefficient of each variable included in the interaction, allowing for a more nuanced understanding of their combined effects on placement stability.

# Chapter 3

## Results

### Descriptive results

Table 3-1 provides a summary of child characteristics at both the child and placement levels. A similar proportion of children (17%) were removed from home due to behavioral problems or because they were victims of physical or sexual abuse. About one-third of children experienced stays in congregate care or a psychiatric hospital and 13% of children remained in an emergency shelter for more than 4 consecutive weeks. A majority of children (90%) were in placements wherein at least 1 other child was fostered concurrently. Additionally, most children (77%) spent more than 1 year in FC, and 19% had at least one prior foster care episode, with 60% of children experiencing 2 or more prior placements. Among children who experienced at least 1 non-progress moves (54%), 43% were moved to more restrictive settings and 79% experienced lateral moves to equally restrictive settings associated with a negative end reason. In terms of racial/ethnic composition, children were predominantly White, non-Hispanic (40%) or Hispanic (32%) with a smaller proportion of Black, non-Hispanic (16%) and other racial/ethnic minority children (12%). The age distribution of children showed that a little under half of children were between 6 and 10 years old, 22% were between 11 and 13 years old, and 32% were adolescents aged 14 to 17 years old. Children were evenly distributed across sex.

Table 3-1: Description of child characteristics at the individual and placement level.

| | Child<br>No. (%) | Placement<br>No. (%) | |
|---|---|---|---|
| **Child risk/protective factor** | | | |
| Ever removed for behavior problems | 166 (17.3) | 239 (14.9) | |
| Ever in congregate care or psychiatric hospital | 294 (30.6) | 535 (33.3) | |
| Ever fostered concurrently with other children | 859 (89.5) | 1484 (92.3) | |
| **Child placement history** | | | |

| | | |
|---|---|---|
| Ever removed for physical/sexual abuse | 172 (17.9) | 293 (18.2) |
| Ever in a shelter for >4 consecutive weeks | 122 (12.7) | 221 (13.8) |
| In foster care for 1+ year | 738 (76.9) | 1327 (82.6) |
| Ever had a prior removal from home | 178 (18.5) | 311 (19.4) |
| ***No. of prior placements*** | | |
| None | 147 (15.3) | 147 (9.1) |
| 1 | 233 (24.3) | 293 (18.2) |
| 2+ | 580 (60.4) | 1167 (72.6) |
| ***Ever experienced a non-progress move*** [a] | | |
| Any type | 515 (53.6) | 1110 (69.1) |
| To equally restrictive setting | 405 (42.2) | 956 (59.5) |
| To more restrictive setting | 220 (22.9) | 477 (29.7) |
| **Child characteristics** | | |
| ***Race & ethnicity*** | | |
| White, non-Hispanic | 379 (39.5) | 622 (38.7) |
| Black, non-Hispanic | 157 (16.4) | 259 (16.1) |
| Other, non-Hispanic | 114 (11.9) | 198 (12.3) |
| Hispanic | 310 (32.3) | 528 (32.9) |
| ***Age group at placement start*** | | |
| 6-10 years old | 436 (45.4) | 762 (47.4) |
| 11-13 years old | 215 (22.4) | 373 (23.2) |
| 14-17 years old | 309 (32.2) | 472 (29.4) |
| ***Sex*** | | |
| Female | 487 (50.7) | 795 (49.5) |
| Male | 473 (49.3) | 812 (50.5) |
| **Sample size** | **960** | **1607** |

a. Non-progress moves are moves that are not to policy-preferred or less restrictive settings, fail to bring children closer to permanency, or disrupt prematurely

Table **3-2** presents an overview of NRFP characteristics at both the NRFP and placement levels. Among NRFPs who had prior experience caring for children with behavioral problems (14%), a large proportion of NRFPs had previously cared for children removed for behavioral

problems (65%) or who were previously placed in restrictive settings (55%). Nearly three-quarters of NRFPs were licensed solely for general placements and 56% fostered multiple children concurrently. Moreover, a non-negligible proportion (29%) of NRFPs had their license previously placed on hold or revoked due to investigated or indicated child abuse and neglect. A majority of NRFPs (94%) was female, benefited from the presence of an additional NRFP (66%), and were licensed for more than one year (96%) during the main observation period. In terms of racial/ethnic composition, NRFPs were predominantly White, non-Hispanic (67%), with smaller proportions of Black, non-Hispanic (14%) and Hispanic (17%) and even fewer (2%) NRFPs belonging to other racial/ethnic minority groups. More than half NRFPs (55%) were between the ages of 40 and 54, with the median being 47 years old.

Table 3-2: Description of non-relative foster parent characteristics at the individual and placement level.

| | **NRFP [a] No. (%)** | **Placement No. (%)** |
|---|---|---|
| **NRFP risk/protective factor** | | |
| Additional children fostered concurrently | 376 (56.9) | 1255 (78.1) |
| Additional NRFP on license | 436 (66.0) | 1040 (64.7) |
| Prior experience with a child at high risk of behavior problems | 94 (14.2) | 570 (35.5) |
| Prior experience with a child removed for behavior problems | 61 (9.2) | 397 (24.7) |
| Prior experience with a child placed in restrictive settings | 52 (7.9) | 399 (24.8) |
| **NRFP licensure history** | | |
| Licensed for 1+ year | 633 (96.1) | 1571 (97.9) |
| Licensed only for general placements [b] | 490 (74.1) | 1357 (84.4) |
| Ever investigated or indicated for child abuse/neglect | 190 (28.8) | 698 (43.5) |
| **NRFP characteristics** | | |
| ***Race & ethnicity*** | | |
| White, non-Hispanic | 445 (67.3) | 1058 (65.8) |
| Black, non-Hispanic | 95 (14.4) | 247 (15.4) |
| Other, non-Hispanic | 11 (1.7) | 26 (1.6) |
| Hispanic | 110 (16.6) | 276 (17.2) |

| | | |
|---|---|---|
| ***Median (IQR) age at placement start*** | 47 (40-54) | 50 (44-57) |
| ***Sex*** | | |
| Female | 622 (94.1) | 1517 (94.4) |
| Male | 39 (5.9) | 90 (5.6) |
| **Sample size** | **661** | **1607** |

a. NRFP: non-relative foster parent
b. Reference group is licensed for general placements, but is also licensed to provide either child-specific or respite care.

## Multivariate results

The following section presents time ratios (TR) at the placement-week level alongside associated 95% confidence intervals (CI) derived from four distinct accelerated failure time (AFT) survival models. Two-way standard errors clustered at the child and NRFP level were used to adjust for interdependency and multilevel interdependence and enhance the robustness of the analyses. As mentioned previously, a TR > 1 suggests that, all other variables held constant, time to non-progress moves was longer while a TR < 1 indicates that a non-progress move occurred sooner.

Table **3-3** reports the results of Model 1 (hereafter referred to as the baseline model), which did not include any interaction effect. Children who were previously removed for behavior problems or placed in restrictive settings experienced non-progress moves 25% sooner than other children. Placements with NRFPs previously investigated or indicated for child abuse and neglect disrupted 47% faster and placements with NRFPs who were licensed only for general placements had a 53% earlier onset of non-progress moves. Coefficients associated with prior NRFPs' experience with behavior problems, the presence or absence of an additional NRFP, the number of prior removals and placements, and demographic characteristics of children and NRFPs did not reach statistical significance.

Table 3-3: Survival results: Characteristics associated with the timing of disruptions.

| **Risk factor** | **TR** | **CI** |
|---|---|---|
| Child previously removed for behavior problems | 0.75* | [0.57-0.99] |
| Additional children fostered concurrently | 0.95 | [0.83-1.10] |
| **Protective factor** | | |
| Prior experience with child behavior problems | 1.27 | [0.90-1.78] |
| Additional NRFP listed on license [a] | 1.28 | [0.93-1.74] |
| **NRFP Covariates** | | |
| Licensed for 1+ year | 0.75 | [0.54-1.04] |
| Licensed only for general placements [b] | 0.47* | [0.30-0.74] |
| Prior investigation/indication for child abuse/neglect | 0.53* | [0.35-0.78] |
| ***Race & ethnicity (ref: White, non-Hispanic)*** | | |
| Black, non-Hispanic | 1.03 | [0.71-1.51] |
| Other, non-Hispanic | 2.52 | [1.04-6.12] |
| Hispanic | 1.11 | [0.73-1.68] |
| ***Age at placement start*** | 0.99 | [0.98-1.00] |
| ***Sex (ref: female)*** | 1.02 | [0.53-1.96] |
| **Child Covariates** | | |
| *Previously removed for abuse* | 0.83 | [0.59-1.18] |
| *Previously in a shelter for >4 consecutive weeks* | 1.35 | [0.92-1.99] |
| ***No. of prior removals (ref: none)*** | 0.93 | [0.60-1.44] |
| ***No. prior placement (ref: none)*** | 0.96 | [0.84-1.08] |
| ***Removal year*** | Yes | |
| ***Placement year*** | Yes | |
| ***Race & ethnicity (ref: White, non-Hispanic)*** | | |
| Black, non-Hispanic | 0.78 | [0.54-1.12] |
| Other, non-Hispanic | 0.78 | [0.51-1.17] |
| Hispanic | 0.91 | [0.66-1.24] |
| ***Age group at placement start (ref: 6-10)*** | | |
| 11-13 years old | 0.99 | [0.73-1.35] |
| 14-17 years old | 1.37 | [0.99-1.90] |

| | | |
|---|---|---|
| ***Sex (ref: female)*** | 1.00 | [0.79-1.28] |
| **Events = 741** | | |
| **Subjects = 1603** | | |

*Note*. * is statistically significant (p < .05) when standard errors are clustered by child ID and NRFP ID.

Table **3-4** summarizes outcomes from Model 2, which contains a two-way interaction between the number of NRFPs and the number of children in each placement. Child behavior problem emerged as the only statistically significant child-level variable linked to faster placement disruption (TR=0.75; 95% CI 0.57-0.99). Among NRFP-level predictors, a prior investigation or indication for child abuse and neglect (TR=0.52; 95% CI 0.35-0.78) and licensure exclusive for general placements (TR=0.47; 95% CI 0.31-0.74) were also associated with earlier onset of non-progress moves. Contrary to expectations, the number of additional children did not appear to influence the timing of non-progress moves. Although the presence of an additional NRFP appears to potentially delay disruptions, this estimate lacked statistical significance. Similarly, the interaction term was not statistically significant, suggesting that the number of NRFPs and the number of children fostered concurrently do not interact to influence time to non-progress move.

Table **3-4**: Interaction effect between number of NRFP and children on timing of disruptions.

| | **Model 2** | |
|---|---|---|
| | **Additional NRFP X additional child** | |
| **Risk factor** | **TR** | **CI** |
| Child previously removed for behavior problems | 0.75* | [0.57-0.99] |
| Additional children fostered concurrently | 0.99 | [0.73-1.34] |
| **Protective factor** | | |
| Prior experience with child behavior problems | 1.27 | [0.90-1.78] |
| Additional NRFP listed on license [a] | 1.34 | [0.93-1.93] |
| **NRFP Covariates** | | |
| Licensed for 1+ year | 0.75 | [0.54-1.04] |
| Licensed only for general placements [b] | 0.47* | [0.31-0.74] |
| Prior investigation/indication for child abuse/neglect | 0.52* | [0.35-0.78] |

| | | |
|---|---|---|
| ***Race & ethnicity (ref: White, non-Hispanic)*** | | |
| Black, non-Hispanic | 1.03 | [0.70-1.51] |
| Other, non-Hispanic | 2.50 | [1.04-6.03] |
| Hispanic | 1.11 | [0.73-1.67] |
| ***Age at placement start*** | 0.99 | [0.98-1.00] |
| ***Sex (ref: female)*** | 1.02 | [0.53-1.96] |
| **Child Covariates** | | |
| *Previously removed for abuse* | 0.83 | [0.59-1.18] |
| *Previously in a shelter for >4 consecutive weeks* | 1.35 | [0.92-1.99] |
| ***No. of prior removals (ref: none)*** | 0.93 | [0.60-1.44] |
| ***No. prior placement (ref: none)*** | 0.96 | [0.84-1.09] |
| ***Removal year*** | Yes | |
| ***Placement year*** | Yes | |
| ***Race & ethnicity (ref: White, non-Hispanic)*** | | |
| Black, non-Hispanic | 0.78 | [0.55-1.12] |
| Other, non-Hispanic | 0.78 | [0.51-1.18] |
| Hispanic | 0.91 | [0.66-1.24] |
| ***Age group at placement start (ref: 6-10)*** | | |
| 11-13 years old | 0.99 | [0.73-1.35] |
| 14-17 years old | 1.38 | [1.00-1.90] |
| ***Sex (ref: female)*** | 1.00 | [0.79-1.28] |
| **Two-way interaction** | | |
| Additional NRFP X additional child | 0.95 | [0.68-1.32] |
| **Events = 741** | | |
| **Subjects = 1603** | | |

*Note*. * is statistically significant ($p < .05$) when standard errors are clustered by child ID and NRFP ID.

a. NRFP: non-relative foster parent
b. Reference group is licensed for general placements, but is also licensed to provide either child-specific or respite care.

Table **3-5** provides results from Model 3, which incorporated a two-way interaction between the number of NRFPs and the presence of child behavior problems in a given placement. While still pointing to slightly shorter lengths of placement before the occurrence of

non-progress moves, the coefficient associated with child behavior problems (TR=0.91; 95% CI 0.58-1.42) unexpectedly lost statistical significance when interacted with the number of NRFPs. This suggests that the presence or absence of an additional NRFP may potentially have a moderating effect on the relationship between child behavioral issues and the timing of non-progress moves. However, the interaction term itself did not reach statistical significance (TR=0.75; 95% CI 0.42-1.33) and the initial hypothesis was not supported. NRFPs licensed only for general placements and NRFPs who were previously investigated or indicated for child abuse and neglect continued to emerge as statistically significant and were respectively associated with a 53% and 47% faster onset of non-progress moves. Other child covariates, including prior removal for physical or sexual abuse, prolonged stay in an emergency shelter, and the number of prior removals and placements, did not appear to impact the timing of disruption, nor did child and NRFP demographic characteristics.

Table **3-5**: Interaction effect between number of NRFP and behavior problems on timing of disruptions.

| | **Model 3** | |
|---|---|---|
| | **Additional NRFP X behavior problems** | |
| **Risk factor** | **TR** | **CI** |
| Child previously removed for behavior problems | 0.91 | [0.58-1.42] |
| Additional children fostered concurrently | 0.95 | [0.82-1.10] |
| **Protective factor** | | |
| Prior experience with child behavior problems | 1.27 | [0.91-1.78] |
| Additional NRFP listed on license [a] | 1.38 | [0.96-1.99] |
| **NRFP Covariates** | | |
| Licensed for 1+ year | 0.75 | [0.54-1.04] |
| Licensed only for general placements [b] | 0.47* | [0.31-0.73] |
| Prior investigation/indication for child abuse/neglect | 0.53* | [0.35-0.78] |
| ***Race & ethnicity (ref: White, non-Hispanic)*** | | |
| Black, non-Hispanic | 1.04 | [0.71-1.52] |
| Other, non-Hispanic | 2.41 | [1.00-5.82] |
| Hispanic | 1.11 | [0.73-1.68] |

| | | |
|---|---|---|
| ***Age at placement start*** | 0.99 | [0.98-1.00] |
| ***Sex (ref: female)*** | 1.00 | [0.52-1.93] |
| **Child Covariates** | | |
| *Previously removed for abuse* | 0.84 | [0.60-1.18] |
| *Previously in a shelter for >4 consecutive weeks* | 1.34 | [0.90-1.97] |
| ***No. of prior removals (ref: none)*** | 0.93 | [0.60-1.44] |
| ***No. prior placement (ref: none)*** | 0.95 | [0.84-1.08] |
| ***Removal year*** | Yes | |
| ***Placement year*** | Yes | |
| ***Race & ethnicity (ref: White, non-Hispanic)*** | | |
| Black, non-Hispanic | 0.77 | [0.54-1.11] |
| Other, non-Hispanic | 0.77 | [0.51-1.17] |
| Hispanic | 0.91 | [0.66-1.24] |
| ***Age group at placement start (ref: 6-10)*** | | |
| 11-13 years old | 0.99 | [0.73-1.35] |
| 14-17 years old | 1.37 | [0.99-1.89] |
| ***Sex (ref: female)*** | 1.01 | [0.79-1.29] |
| **Two-way interaction** | | |
| Additional NRFP X behavior problems | 0.75 | [0.42-1.33] |
| **Events = 741** | | |
| **Subjects = 1603** | | |

*Note*. * is statistically significant (p < .05) when standard errors are clustered by child ID and NRFP ID.

a. NRFP: non-relative foster parent
b. Reference group is licensed for general placements, but is also licensed to provide either child-specific or respite care.

Table **3-6** presents findings from Model 4, which includes a two-way interaction between NRFPs' prior experience with behavior problems and the presence of child behavior problems. Prior experience with behavior problems was not statistically significant for children who did not have known behavioral issues. However, both child behavioral issues (TR=0.59; 95% CI 0.43-0.82) and their interaction with NRFPs' prior experience with behavior problems (TR=1.87; 95% CI 1.09-3.20) emerged as statistically significant. Thus, compared to children without known

behavioral issues placed with inexperienced NRFPs, children removed for behavior problems who were placed with inexperienced NRFPs had a 41% faster onset of non-progress move. The interaction coefficient cannot be directly interpreted in isolation, but its multiplication with the estimates of both interacting variables suggests that the presence of child behavior problems is no longer predictive of faster time to disruption (TR=1.10) when NRFPs have prior experience caring for children with behavioral issues. Conversly, NRFPs' prior experience with behavior problems nearly doubles (TR=1.94) placement duration before the occurrence of non-progress moves for children previously removed for behavior problems or placed in more restrictive settings. Interestingly, length of licensure became statistically significant (TR=0.74; 95% CI 0.50-0.99), indicating that children placed with NRFPs who had been licensed for at least 52 weeks experienced non-progress moves 26% earlier. Consistent with all other models, NRFPs with a prior investigation or indication for child abuse and neglect and NRFPs licensed solely for general placements were still more likely to experience shorter times non-progress moves. Coefficients for all other child and NRFP variables did not reach statistical significance.

Table **3-6**: Interaction effect between prior experience and behavior problems on timing of disruptions.

| | **Model 4** | |
|---|---|---|
| | **NRFP experience X behavior problems** | |
| **Risk factor** | **TR** | **CI** |
| Child previously removed for behavior problems | 0.59* | [0.43-0.82] |
| Additional children fostered concurrently | 0.95 | [0.82-1.09] |
| **Protective factor** | | |
| Prior experience with child behavior problems | 1.04 | [0.69-1.55] |
| Additional NRFP listed on license [a] | 1.28 | [0.94-1.74] |
| **NRFP Covariates** | | |
| Licensed for 1+ year | 0.74* | [0.53-1.02] |
| Licensed only for general placements [b] | 0.48* | [0.31-0.74] |
| Prior investigation/indication for child abuse/neglect | 0.54* | [0.37-0.80] |
| ***Race & ethnicity (ref: White, non-Hispanic)*** | | |
| Black, non-Hispanic | 1.02 | [0.70-1.49] |

| | | |
|---|---|---|
| Other, non-Hispanic | 2.48 | [1.06-5.81] |
| Hispanic | 1.09 | [0.72-1.63] |
| ***Age at placement start*** | 0.99 | [0.98-1.00] |
| ***Sex (ref: female)*** | 0.97 | [0.50-1.88] |
| **Child Covariates** | | |
| *Previously removed for abuse* | 0.84 | [0.59-1.18] |
| *Previously in a shelter for >4 consecutive weeks* | 1.36 | [0.93-2.01] |
| ***No. of prior removals (ref: none)*** | 0.93 | [0.60-1.43] |
| ***No. prior placement (ref: none)*** | 0.96 | [0.84-1.09] |
| ***Removal year*** | Yes | |
| ***Placement year*** | Yes | |
| ***Race & ethnicity (ref: White, non-Hispanic)*** | | |
| Black, non-Hispanic | 0.78 | [0.55-1.12] |
| Other, non-Hispanic | 0.78 | [0.52-1.18] |
| Hispanic | 0.92 | [0.68-1.26] |
| ***Age group at placement start (ref: 6-10)*** | | |
| 11-13 years old | 1.00 | [0.73-1.37] |
| 14-17 years old | 1.37 | [1.00-1.88] |
| ***Sex (ref: female)*** | 1.03 | [0.80-1.32] |
| **Two-way interaction** | | |
| NRFP experience X behavior problems | 1.87* | [1.09-3.20] |
| **Events = 741** | | |
| **Subjects = 1603** | | |

*Note*. * is statistically significant ($p < .05$) when standard errors are clustered by child ID and NRFP ID.

a. NRFP: non-relative foster parent
b. Reference group is licensed for general placements, but is also licensed to provide either child-specific or respite care.

# Chapter 4

## Discussion

This study examined how specific risk and protective factors interacted to predict the timing of non-progress moves for children placed with NRFPs. The following discussion summarizes major findings and offers insight into potential implications for research and practice.

Results from this study suggest that child behavior problems predict accelerated time to non-progress moves. This finding is consistent with prior literature linking the inherent challenges of caring for children with complex behavioral needs to increased risk of placement disruptions (Goemans et al., 2018; Leathers et al., 2019; McKeough et al., 2017; Rock et al., 2015). Given that behavior problems can negatively impact family dynamics and put a strain on resources available to NRFPs, it is unsurprising that previous researchers have found a positive association between the presence of behavioral issues and parenting stress (Harding et al., 2018; West et al., 2023). The presence of an additional NRFP did not interact directly with behavior problems to influence the timing of non-progress moves. A potential explanation may be that behavior problems may differentially impact NRFPs based on intrinsic resources such as temperament, distress tolerance, and parenting skills. Thus, some NRFPs may be more resilient and less negatively affected by behavioral issues (Cooley et al., 2015), regardless of whether they benefit from additional caregiving support. Nonetheless, ensuring access to accurate information about children's behavior problems prior to the start of a placement (Octoman & McLean, 2014) and evidence-based interventions aimed at decreasing child behavioral issues (Fisher & Stoolmiller, 2008; Greeno et al., 2016; Price et al., 2015) may be essential to promote more stable placements for children with behavior issues. Further investigation is also needed to ascertain the presence of a moderating effect of additional parenting support on child behavioral issues.

NRFPs' prior experience with behavior problems appeared to have a protective effect against non-progress moves for children who were previously removed for behavior problems (including substance abuse and child disability) or placed in group homes, residential treatment

facilities, or psychiatric hospitals. Results from a statistically significant two-way interaction yielded interesting results. On one hand, they show that longer length of licensure is associated with earlier timing of non-progress moves, indicating a potential link to common issues such as burnout and compassion fatigue (Dowdy-Hazlett & Clark, 2024; Hannah & Woolgar, 2018). On the other hand, they also suggest that NRFPs' prior experience provides a buffer against the negative effects of child behavior problems, effectively doubling placement duration before the onset of non-progress moves. Potential explanations include the possibility that NRFPs who previously cared for such children may have acquired specialized skills and strategies to manage difficult behaviors, developed more realistic expectations, created a network of external support and resources, or actively sought placements for such children. Another potential interpretation is that children may be differentially susceptible such that children with challenging behavior issues may also benefit the most from placement with more experienced, responsive, and sensitive caregivers (Barone et al., 2019; Belsky & Pluess, 2009; Hentges et al., 2015; Kochanska & Kim, 2013). These findings suggest that optimizing child-environment fit by placing children with challenging behavioral issues or a history of placement in restrictive settings with more experienced NRFPs may be a critical consideration to promote placement stability and that retention of experienced NRFPs may be especially important to reduce non-progress moves for this population.

Children placed with NRFPs who were previously investigated or indicated for child abuse and neglect experienced significantly shorter placements before non-progress moves occurred. These NRFPs may exhibit authoritarian parenting styles, engage in harsher discipline practices, or demonstrate neglectful behaviors, which could have prompted the FC agency to take such actions. Additionally, NRFPs licensed only for general placements, as opposed to those also licensed for child-specific or respite care, were more likely to terminate placements sooner. It is possible that NRFPs' commitment to a child's permanency may not be as strong as the sense of binding duty observed in kin placements (Rock et al., 2015). This finding also aligns

with extant literature supporting that kinship caregivers, who typically hold a child-specific license, experience lower rates of placement disruptions (Osborne et al., 2021; Perry et al., 2012).

Surprisingly, the number of prior removal and placements was not associated with the timing of non-progress moves despite past research findings supporting their contribution in increasing placement instability (Oosterman et al., 2007). These findings may stem from the way disruptions were operationalized in this study (e.g., focusing on non-progress moves as opposed to counting every move as a disruption) and the exclusion of restrictive settings, which are typically associated with more frequent placement disruptions (Stenason & Romano, 2023). Also surprising was the absence of interaction between the number of NRFPs and number of children fostered concurrently given that previous studies established that an unbalanced ratio of children to caregivers increases the risk of placement disruptions (Montserrat et al., 2020).

# Chapter 5

## Strengths and limitations

This study has several strengths. Although prior placement instability studies have used foster parent licensure information to capture constructs such as length of service (Gibbs & Wildfire, 2007), this study uses rich information on NRFPs' licensure type and history and leverages the longitudinal nature of the data and the availability of unique foster home identifiers to capture NRFPs' time-varying prior fostering experiences across placements. The use of time-to-event analysis also reduces bias towards children with longer lengths of stay in FC (Koh et al., 2014). Furthermore, administrative FC data often lacks information on the underlying reasons behind placement disruptions (Connell et al., 2006; Jedwab et al., 2020). This study differentiates between proactive and non-progress placement moves (Osborne et al., 2021) and combines placement end reasons and subsequent placement restrictiveness to identify non-progress moves more accurately. This is important since accounting for change in placement type between previous and subsequent placements (e.g., move from less restrictive to more restrictive) is likely to yield different stability estimates compared to looking at all placement moves without considering whether they are more, less, or equally restrictive (Font, 2015).

However, this study also had several limitations. First, the number of NRFPs was a static measure attached to an entire licensure period, which precludes the identification of important changes in co-fostering support such as marriage and divorce. Second, administrative licenses were created to cover gaps in licensure when an active placement was found, which may overestimate the actual length of licensure. This administrative variable was tested and found to be non-significant. Third, some variables were combined (e.g., child was removed for behavior problems or was previously placed in restrictive settings), which reduces the richness of information and limits more in-depth comparisons (e.g., behavior problems leading to removal from home may differ significantly from those resulting in placement in congregate care or psychiatric hospitals). Fourth, the data did not include enough information to identify sibling

groups, which may potentially impact the effect of having additional children fostered concurrently. Moreover, the data did not include a way to determine whether NRFPs previously had biological children and if they were currently living in the household (Adams et al., 2018a). Fifth, multivariate models only included two-way interactions, potentially overlooking the suppressive, mediating, or moderating effect of confounding variables not included in this study, such as birth parents characteristics (Courtney, 2011; Jedwab et al., 2020; Oosterman et al., 2007). Lastly, another important limitation was the inability to differentiate between internalizing and externalizing behaviors as the latter (e.g., abuse, aggression, and self-harm) may be more challenging for NRFPs than internalizing behavior problems such as anxiety or depression (Adams et al., 2018b; Taylor & McQuillan, 2014).

# Chapter 6

## Conclusion and future directions

This study investigated a series of two-way interactions between resources (i.e., additional NRFP and prior experience with behavior problems) and strain (i.e., multiple children fostered concurrently and child behavioral issues) to understand their impact on the timing of placement disruptions for children in NRFC. Key findings from this study align with prior research and suggests that behavior problems are an important risk factors for placement disruptions, but also offer new insights. Notably, NRFPs' prior caregiving experience may help mitigate the risk of non-progress moves among children who were previously removed for behavior problems or spent time in congregate care settings or psychiatric hospitals. Future research should delve deeper into higher-level interactions to disentangle the complex network of influences leading to placement disruptions. It should also aim to investigate the role of emotional abuse on placement stability.

# References

*2020 Foster Care Redesign Frequently Asked Questions (FAQs): Glossary of Terms*. (n.d.). Rhode Island Department of Children, Youth & Families. https://dcyf.ri.gov/sites/g/files/xkgbur416/files/documents/news/English---Glossary-of-Terms-1020.pdf

Adams, E., Hassett, A. R., & Lumsden, V. (2018a). 'They needed the attention more than I did': How do the birth children of foster carers experience the relationship with their parents? *Adoption & Fostering*, *42*(2), 135–150. https://doi.org/10.1177/0308575918773683

Adams, E., Hassett, A. R., & Lumsden, V. (2018b). What do we know about the impact of stress on foster carers and contributing factors? *Adoption & Fostering*, *42*(4), 338–353. https://doi.org/10.1177/0308575918799956

Arnett, J. J. (2007). Emerging Adulthood: What Is It, and What Is It Good For? *Child Development Perspectives*, *1*(2), 68–73. https://doi.org/10.1111/j.1750-8606.2007.00016.x

Baer, L., & Diehl, D. K. (2019). Foster care for teenagers: Motivators, barriers, and strategies to overcome barriers. *Children and Youth Services Review*, *103*, 264–277. https://doi.org/10.1016/j.childyouth.2019.06.004

Barone, L., Ozturk, Y., & Lionetti, F. (2019). The key role of positive parenting and children's temperament in post-institutionalized children's socio-emotional adjustment after adoption placement. A RCT study. *Social Development*, *28*(1), 136–151. https://doi.org/10.1111/sode.12329

Belsky, J. (1984). The Determinants of Parenting: A Process Model. *Child Development*, *55*(1), 83–96. https://doi.org/10.2307/1129836

Belsky, J., & Pluess, M. (2009). Beyond diathesis stress: Differential susceptibility to environmental influences. *Psychological Bulletin*, *135*(6), 885–908. https://doi.org/10.1037/a0017376

Bloome, D. (2017). Childhood family structure and intergenerational income mobility in the United States. *Demography*, *54*(2), 541–569. https://doi.org/10.1007/s13524-017-0564-4

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.

Brown, J. D., & Bednar, L. M. (2006). Foster parent perceptions of placement breakdown. *Children and Youth Services Review*, *28*(12), 1497–1511. https://doi.org/10.1016/j.childyouth.2006.03.004

Carnochan, S., Moore, M., & Austin, M. J. (2013). Achieving Placement Stability. *Journal of Evidence-Based Social Work*, *10*(3), 235–253. https://doi.org/10.1080/15433714.2013.788953

Cassarino-Perez, L., Crous, G., Goemans, A., Montserrat, C., & Sarriera, J. C. (2018). From care to education and employment: A meta-analysis. *Children and Youth Services Review*, *95*, 407–416. https://doi.org/10.1016/j.childyouth.2018.08.025

Chamberlain, P., Price, J. M., Reid, J. B., Landsverk, J., Fisher, P. A., & Stoolmiller, M. (2006). Who disrupts from placement in foster and kinship care? *Child Abuse & Neglect*, *30*(4), 409–424. https://doi.org/10.1016/j.chiabu.2005.11.004

Chateauneuf, D., Poitras, K., Simard, M.-C., & Buisson, C. (2022). Placement stability: What role do the different types of family foster care play? *Child Abuse & Neglect*, *130*, 105359. https://doi.org/10.1016/j.chiabu.2021.105359

Colton, M., Roberts, S., & Williams, M. (2006). The Recruitment and Retention of Family Foster-Carers: An International and Cross-Cultural Analysis. *British Journal of Social Work*, *38*(5), 865–884. https://doi.org/10.1093/bjsw/bcl375

Connell, C. M., Vanderploeg, J. J., Flaspohler, P., Katz, K. H., Saunders, L., & Tebes, J. K. (2006). Changes in Placement among Children in Foster Care: A Longitudinal Study of Child and Case Influences. *Social Service Review*, *80*(3), 398–418. https://doi.org/10.1086/505554

Cooley, M. E., Farineau, H. M., & Mullis, A. K. (2015). Child behaviors as a moderator: Examining the relationship between foster parent supports, satisfaction, and intent to continue fostering. *Child Abuse & Neglect*, *45*, 46–56. https://doi.org/10.1016/j.chiabu.2015.05.007

Cooley, M. E., Thompson, H. M., & Newell, E. (2019). Examining the Influence of Social Support on the Relationship Between Child Behavior Problems and Foster Parent Satisfaction and Challenges. *Child & Youth Care Forum*, *48*(3), 289–303. https://doi.org/10.1007/s10566-018-9478-6

Courtney, J. R. (2011). Predictors of Placement Stability at the State Level: The Use of Logistic Regression to Inform Practice. *Child Welfare*, *90*(2).

Crum, W. (2010). Foster parent parenting characteristics that lead to increased placement stability or disruption. *Children and Youth Services Review*, *32*(2), 185–190. https://doi.org/10.1016/j.childyouth.2009.08.022

D'Andrade, A. (2005). Placement stability in foster care. In *Child welfare for the 21st century: A handbook of practices, policies, and programs* (In G. P. Mallon&P. M. Hess (Eds.), pp. 608–622). Columbia University Press.

Daniel, E. (2011). Gentle iron will: Foster parents' perspectives. *Children and Youth Services Review*, *33*(6), 910–917. https://doi.org/10.1016/j.childyouth.2010.12.009

De Maeyer, S., Vanderfaeillie, J., Vanschoonlandt, F., Robberechts, M., & Van Holen, F. (2014). Motivation for foster care. *Children and Youth Services Review*, *36*, 143–149. https://doi.org/10.1016/j.childyouth.2013.11.003

Dowdy-Hazlett, T., & Clark, S. L. (2024). Latent profile analysis of risk and protective factors among foster parents: A cross-sectional study. *Children and Youth Services Review, 156*, 107347. https://doi.org/10.1016/j.childyouth.2023.107347

Doyle, J. J., & Peters, H. E. (2007). The market for foster care: An empirical study of the impact of foster care subsidies. *Review of Economics of the Household*, *5*(4), 329. https://doi.org/10.1007/s11150-007-9018-x

Eggertsen, L. (2008). Primary Factors Related to Multiple Placements for Children in Out-of-Home Care. *CHILD WELFARE, 87*.

Elder, G. H. (1998). The life course as developmental theory. *Child Development*, *69*(1), 1–12.

Engler, A. D., Sarpong, K. O., Van Horne, B. S., Greeley, C. S., & Keefe, R. J. (2022). A Systematic Review of Mental Health Disorders of Children in Foster Care. *Trauma, Violence, & Abuse*, *23*(1), 255–264. https://doi.org/10.1177/1524838020941197

Family First Prevention Services Act, Pub. L. No. 115–123, 1892 HR (2018).

Findley, E., & Praetorius, R. T. (2023). Points of foster parent stress in the system: A qualitative interpretive meta-synthesis. *Children and Youth Services Review*, *150*, 106966. https://doi.org/10.1016/j.childyouth.2023.106966

Fisher, P. A., & Stoolmiller, M. (2008). Intervention effects on foster parent stress: Associations with child cortisol levels. *Development and Psychopathology*, *20*(3), 1003–1021. https://doi.org/10.1017/S0954579408000473

Fisher, P. A., Stoolmiller, M., Mannering, A. M., Takahashi, A., & Chamberlain, P. (2011). Foster placement disruptions associated with problem behavior: Mitigating a threshold effect. *Journal of Consulting and Clinical Psychology*, *79*(4), 481–487. https://doi.org/10.1037/a0024313

Font, S. A. (2014). Kinship and nonrelative foster care: The effect of placement type on child well-being. *Child Development*, *85*(5), 2074–2090. https://doi.org/10.1111/cdev.12241

Font, S. A. (2015). Is higher placement stability in kinship foster care by virtue or design? *Child Abuse & Neglect*, *42*, 99–111. https://doi.org/10.1016/j.chiabu.2015.01.003

Font, S. A., & Kim, H. W. (2022). Sibling Separation and Placement Instability for Children in Foster Care. *Child Maltreatment*, *27*(4), 583–595. https://doi.org/10.1177/10775595211012482

Font, S. A., Sattler, K. M. P., & Gershoff, E. T. (2018). Measurement and correlates of foster care placement moves. *Children and Youth Services Review*, *91*, 248–258. https://doi.org/10.1016/j.childyouth.2018.06.019

Gibbs, D., & Wildfire, J. (2007). Length of service for foster parents: Using administrative data to understand retention. *Children and Youth Services Review*, *29*(5), 588–599. https://doi.org/10.1016/j.childyouth.2006.11.002

Goemans, A., Geel, M. V., & Vedder, P. (2018). Foster children's behavioral development and foster parent stress: Testing a transactional model. *Journal of Child and Family Studies*, *27*(3), 990–1001. https://doi.org/10.1007/s10826-017-0941-z

Greeno, E. J., Lee, B. R., Uretsky, M. C., Moore, J. E., Barth, R. P., & Shaw, T. V. (2016). Effects of a Foster Parent Training Intervention on Child Behavior, Caregiver Stress, and Parenting Style. *Journal of Child and Family Studies*, *25*(6), 1991–2000. https://doi.org/10.1007/s10826-015-0357-6

Greeson, J. K. P., Gyourko, J., Ortiz, A. J., Coleman, D., & Cancel, S. (2021). "One hundred and ninety-four got licensed by Monday": Application of design thinking for foster care innovation and transformation in Rhode Island. *Children and Youth Services Review*, *128*, 106166. https://doi.org/10.1016/j.childyouth.2021.106166

Gu, A., & Yoo, H. I. (2019). vcemway: A one-stop solution for robust inference with multiway clustering. *The Stata Journal: Promoting Communications on Statistics and Stata*, *19*(4), 900–912. https://doi.org/10.1177/1536867X19893637

Hamilton, L. (2011). An exploratory investigation of foster parent retention in Arkansas. *Midsouth Political Science Review, 12*, 69–85.

Hanlon, R., & Feltner, A. (2021). Systematic Review of Foster Parent Recruitment. *Child Welfare*, *99*(1).

Hannah, B., & Woolgar, M. (2018). Secondary trauma and compassion fatigue in foster carers. *Clinical Child Psychology and Psychiatry*, *23*(4), 629–643. https://doi.org/10.1177/1359104518778327

Harding, L., Murray, K., Shakespeare-Finch, J., & Frey, R. (2018). High stress experienced in the foster and kin carer role: Understanding the complexities of the carer and child in context. *Children and Youth Services Review*, *95*, 316–326. https://doi.org/10.1016/j.childyouth.2018.11.004

Harkin, C., & Houston, S. (2016). Reviewing the literature on the breakdown of foster care placements for young people: Complexity and the social work task. *Child Care in Practice, 22*(2), 98–112. https://doi.org/10.1080/13575279.2015.1102124

Hentges, R. F., Davies, P. T., & Cicchetti, D. (2015). Temperament and Interparental Conflict: The Role of Negative Emotionality in Predicting Child Behavioral Problems. *Child Development*, *86*(5), 1333–1350. https://doi.org/10.1111/cdev.12389

Hill, R. (1949). *Families under stress; adjustment to the crises of war separation and reunion*. Harper.

James, S., Landsverk, J., & Slymen, D. J. (2004). Placement movement in out-of-home care: Patterns and predictors. *Children and Youth Services Review*, *26*(2), 185–206. https://doi.org/10.1016/j.childyouth.2004.01.008

Jedwab, M., Xu, Y., & Shaw, T. V. (2020). Kinship care first? Factors associated with placement moves in out-of-home care. *Children and Youth Services Review*, *115*, 105104. https://doi.org/10.1016/j.childyouth.2020.105104

Johnson, R. M., Strayhorn, T. L., & Parler, B. (2020). “I just want to be a regular kid:” A qualitative study of sense of belonging among high school youth in foster care. *Children and Youth Services Review, 111,* 104832. https://doi.org/10.1016/j.childyouth.2020.104832

Jones, A. A., Hard, G., Gray, J., Apsley, H. B., & Santos-Lozada, A. R. (2023). The Role of Substance Use Disorders on Suicidal Ideation, Planning, and Attempts: A Nationally Representative Study of Adolescents and Adults in the United States, 2020. *Substance Abuse: Research and Treatment, 17,* 11782218231216233. https://doi.org/10.1177/11782218231216233

Khoo, E., & Skoog, V. (2014). The road to placement breakdown: Foster parents’ experiences of the events surrounding the unexpected ending of a child’s placement in their care. *Qualitative Social Work, 13*(2), 255–269. https://doi.org/10.1177/1473325012474017

Kochanska, G., & Kim, S. (2013). Difficult temperament moderates links between maternal responsiveness and children’s compliance and behavior problems in low-income families. *Journal of Child Psychology and Psychiatry*, *54*(3), 323–332. https://doi.org/10.1111/jcpp.12002

Koh, E., Rolock, N., Cross, T. P., & Eblen-Manning, J. (2014). What explains instability in foster care? Comparison of a matched sample of children with stable and unstable placements. *Children and Youth Services Review, 37,* 36–45. https://doi.org/10.1016/j.childyouth.2013.12.007

Konijn, C., Admiraal, S., Baart, J., Van Rooij, F., Stams, G.-J., Colonnesi, C., Lindauer, R., & Assink, M. (2019a). Foster care placement instability: A meta-analytic review. *Children and Youth Services Review, 96,* 483–499. https://doi.org/10.1016/j.childyouth.2018.12.002

LaBrenz, C. A., Kim, J., Harris, M. S., Crutchfield, J., Choi, M., Robinson, E. D., Findley, E., & Ryan, S. D. (2022). Racial Matching in Foster Care Placements and Subsequent Placement Stability: A National Study. *Child and Adolescent Social Work Journal*, *39*(5), 583–594. https://doi.org/10.1007/s10560-022-00831-x

Lanigan, J. D., & Burleson, E. (2017). Foster Parent's Perspectives Regarding the Transition of a New Placement into their Home: An Exploratory Study. *Journal of Child and Family Studies*, *26*(3), 905–915. https://doi.org/10.1007/s10826-016-0597-0

Leathers, S. J. (2006). Placement disruption and negative placement outcomes among adolescents in long-term foster care: The role of behavior problems. *Child Abuse & Neglect*, *30*(3), 307–324. https://doi.org/10.1016/j.chiabu.2005.09.003

Leathers, S. J., Spielfogel, J. E., Geiger, J., Barnett, J., & Vande Voort, B. L. (2019). Placement disruption in foster care: Children's behavior, foster parent support, and parenting experiences. *Child Abuse & Neglect*, *91*, 147–159. https://doi.org/10.1016/j.chiabu.2019.03.012

Lee, D., & McLanahan, S. (2015). Family structure transitions and child development: Instability, selection, and population heterogeneity. *American Sociological Review*, *80*(4), 738–763. https://doi.org/10.1177/0003122415592129

Li, D., Chng, G. S., & Chu, C. M. (2019). Comparing Long-Term Placement Outcomes of Residential and Family Foster Care: A Meta-Analysis. *Trauma, Violence, & Abuse*, *20*(5), 653–664. https://doi.org/10.1177/1524838017726427

Liming, K. W., Akin, B., & Brook, J. (2021). Adverse Childhood Experiences and Foster Care Placement Stability. *Pediatrics*, *148*(6), e2021052700. https://doi.org/10.1542/peds.2021-052700

Lindell, K. U., Sorenson, C. K., & Mangold, S. V. (2020). The Family First Prevention Services Act: A New Era of Child Welfare Reform. *Public Health Reports*, *135*(2), 282–286. https://doi.org/10.1177/0033354919900892

Lopoo, L. M., & DeLeire, T. (2014). Family structure and the economic wellbeing of children in youth and adulthood. *Social Science Research*, *43*, 30–44. https://doi.org/10.1016/j.ssresearch.2013.08.004

MacGregor, T. E., Rodger, S., Cummings, A. L., & Leschied, A. W. (2006). The needs of foster parents: A qualitative study of motivation, support, and retention. *Qualitative Social Work*, *5*(3), 351–368. https://doi.org/10.1177/1473325006067365

Magnuson, K., & Berger, L. M. (2009). Family structure states and transitions: Associations with children's well-being during middle childhood. *Journal of Marriage and Family*, *71*(3), 575–591. https://doi.org/10.1111/j.1741-3737.2009.00620.x

McGuire, A., Cho, B., Huffhines, L., Gusler, S., Brown, S., & Jackson, Y. (2018). The relation between dimensions of maltreatment, placement instability, and mental health among youth in foster care. *Child Abuse & Neglect*, *86*, 10–21. https://doi.org/10.1016/j.chiabu.2018.08.012

McKeough, A., Bear, K., Jones, C., Thompson, D., Kelly, P., & Campbell, L. (2017). Foster carer stress and satisfaction: An investigation of organisational, psychological and placement factors. *Children and Youth Services Review*, *76*, 10–19. https://doi.org/10.1016/j.childyouth.2017.02.002

McLanahan, S., Tach, L., & Schneider, D. (2013). The causal effects of father absence. *Annual Review of Sociology*, *39*(1), 399–427. https://doi.org/10.1146/annurev-soc-071312-145704

McMillen, J. C., Zima, B. T., Scott, L. D., Auslander, W. F., Munson, M. R., Ollie, M. T., & Spitznagel, E. L. (2005). Prevalence of Psychiatric Disorders Among Older Youths in the

Foster Care System. *Journal of the American Academy of Child & Adolescent Psychiatry*, *44*(1), 88–95. https://doi.org/10.1097/01.chi.0000145806.24274.d2

Miller, L., Randle, M., & Dolnicar, S. (2019). Carer Factors Associated with Foster-Placement Success and Breakdown. *The British Journal of Social Work*, *49*(2), 503–522. https://doi.org/10.1093/bjsw/bcy059

Minuchin, S. (1974). *Families and Family Therapy*. Harvard University Press.

Montserrat, C., Llosada-Gistau, J., & Fuentes-Peláez, N. (2020). Child, family and system variables associated to breakdowns in family foster care. *Children and Youth Services Review*, *109*, 104701. https://doi.org/10.1016/j.childyouth.2019.104701

Moss, H. B., Ge, S., Trager, E., Saavedra, M., Yau, M., Ijeaku, I., & Deas, D. (2020). Risk for Substance Use Disorders in young adulthood: Associations with developmental experiences of homelessness, foster care, and adverse childhood experiences. *Comprehensive Psychiatry*, *100*, 152175. https://doi.org/10.1016/j.comppsych.2020.152175

Noonan, K., Rubin, D., Mekonnen, R., Zlotnik, S., & O'Reilly, A. (2009). *Securing Child Safety, Well-being, and Permanency Through Placement Stability in Foster Care* (1; Evidence to Action). PolicyLab at The Children's Hospital of Philadelphia.

Octoman, O., & McLean, S. (2014). Challenging behaviour in foster care: What supports do foster carers want? *Adoption & Fostering*, *38*(2), 149–158. https://doi.org/10.1177/0308575914532404

O'Neill, M., Risley-Curtiss, C., Ayón, C., & Williams, L. R. (2012). Placement stability in the context of child development. *Children and Youth Services Review*, *34*(7), 1251–1258. https://doi.org/10.1016/j.childyouth.2012.02.018

Oosterman, M., Schuengel, C., Wim Slot, N., Bullens, R. A. R., & Doreleijers, T. A. H. (2007a). Disruptions in foster care: A review and meta-analysis. *Children and Youth Services Review*, *29*(1), 53–76. https://doi.org/10.1016/j.childyouth.2006.07.003

Osborne, J., Hindt, L. A., Lutz, N., Hodgkinson, N., & Leon, S. C. (2021). Placement stability among children in kinship and non-kinship foster placements across multiple placements. *Children and Youth Services Review*, *126*, 106000. https://doi.org/10.1016/j.childyouth.2021.106000

Palmer, L., Ahn, E., Traube, D., Prindle, J., & Putnam-Hornstein, E. (2020). Correlates of entry into congregate care among a cohort of California foster youth. *Children and Youth Services Review*, *110*, 104772. https://doi.org/10.1016/j.childyouth.2020.104772

Palmer, L., Font, S., Herd, T., Prindle, J., & Putnam-Hornstein, E. (2024). Rates of Emotional Disturbance Among Children in Foster Care: Comparing Federal Child Welfare Data and Medicaid Records in Two States. *Child Maltreatment*, *29*(1), 8–13. https://doi.org/10.1177/10775595221118931

Perry, G., Daly, M., & Kotler, J. (2012). Placement stability in kinship and non-kin foster care: A Canadian study. *Children and Youth Services Review*, *34*(2), 460–465. https://doi.org/10.1016/j.childyouth.2011.12.001

Platt, C., & Gephart, S. M. (2022). Placement disruption of children with disabilities in foster care. *Journal of Pediatric Nursing*, *66*, 30–35. https://doi.org/10.1016/j.pedn.2022.05.004

Price, J. M., Roesch, S., Walsh, N. E., & Landsverk, J. (2015). Effects of the KEEP Foster Parent Intervention on Child and Sibling Behavior Problems and Parental Stress During a Randomized Implementation Trial. *Prevention Science*, *16*(5), 685–695. https://doi.org/10.1007/s11121-014-0532-9

Redding, R. E., Fried, C., & Britner, P. A. (2000). Predictors of Placement Outcomes in Treatment Foster Care: Implications for Foster Parent Selection and Service Delivery.

*Journal of Child and Family Studies*, *9*(4), 425–447. https://doi.org/10.1023/A:1009418809133

Rhodes, K., Cox, M. E., Orme, J. G., & Coakley, T. (2006). Foster parents' reasons for fostering and foster family utilization. *The Journal of Sociology & Social Welfare*, *33*(4). https://doi.org/10.15453/0191-5096.3206

Rhodes, K. W., Orme, J. G., Cox, M. E., & Buehler, C. (2003). Foster family resources, psychosocial functioning, and retention. *Social Work Research*, *27*(3), 135–150.

Richardson, E. W., Grogan, C. S., Richardson, S. L. L., & Small, S. L. (2018). Displacement, caregiving, and the ecological system of youth in foster care: A theoretical perspective. *Journal of Family Social Work*, *21*(4–5), 348–364. https://doi.org/10.1080/10522158.2018.1469561

Rock, S., Michelson, D., Thomson, S., & Day, C. (2015a). Understanding foster placement instability for looked after children: A systematic review and narrative synthesis of quantitative and qualitative evidence. *British Journal of Social Work*, *45*(1), 177–203. https://doi.org/10.1093/bjsw/bct084

Rubin, D. M., O'Reilly, A. L. R., Luan, X., & Localio, A. R. (2007). The Impact of Placement Stability on Behavioral Well-being for Children in Foster Care. *Pediatrics*, *119*(2), 336–344. https://doi.org/10.1542/peds.2006-1995

Ryan, J. P., & Testa, M. F. (2005). Child maltreatment and juvenile delinquency: Investigating the role of placement and placement instability. *Children and Youth Services Review*, *27*(3), 227–249. https://doi.org/10.1016/j.childyouth.2004.05.007

Sattler, K. M. P., Font, S. A., & Gershoff, E. T. (2018). Age-specific risk factors associated with placement instability among foster children. *Child Abuse & Neglect*, *84*, 157–169. https://doi.org/10.1016/j.chiabu.2018.07.024

Stenason, L., & Romano, E. (2023). Number of placement changes among young people in care: Youth and caregiver associations. *Children and Youth Services Review*, *144*, 106737. https://doi.org/10.1016/j.childyouth.2022.106737

Strickler, A., Mihalo, J. R., Bundick, M. J., & Trunzo, A. C. (2016). Relationship Between Time in Residential Treatment and Youth Outcomes: Results from a Cross-Site 5-Year Analysis. *Journal of Child and Family Studies*, *25*(6), 1860–1870. https://doi.org/10.1007/s10826-015-0347-8

Taylor, B. J., & McQuillan, K. (2014). Perspectives of Foster Parents and Social Workers on Foster Placement Disruption. *Child Care in Practice*, *20*(2), 232–249. https://doi.org/10.1080/13575279.2013.859567

Tonheim, M., & Iversen, A. C. (2019). "We felt completely left to ourselves." Foster parents' views on placement disruption. *Child & Family Social Work*, *24*(1), 90–97. https://doi.org/10.1111/cfs.12585

Turney, K., & Wildeman, C. (2016). Mental and Physical Health of Children in Foster Care. *Pediatrics*, *138*(5), e20161118. https://doi.org/10.1542/peds.2016-1118

Turney, K., & Wildeman, C. (2017). Adverse childhood experiences among children placed in and adopted from foster care: Evidence from a nationally representative survey. *Child Abuse & Neglect*, *64*, 117–129. https://doi.org/10.1016/j.chiabu.2016.12.009

U.S. Department of Health & Human Services. (2023). *Child maltreatment 2021*. Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. https://www.acf.hhs.gov/sites/default/files/documents/cb/cm2021.pdf

U.S. Department of Health and Human Services. (2023). *The AFCARS report: Preliminary estimates for FY 2021 as of June 28, 2022* (29). Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. https://www.acf.hhs.gov/sites/default/files/documents/cb/afcars-report-29.pdf

U.S. Government Accountability Office. (2015). *HHS could do more to support states' efforts to keep children in family-based care*. https://www.gao.gov/assets/gao-16-85.pdf

U.S. Government Accountability Office. (2018). *Additional actions could help HHS better support states' use of private providers to recruit and retain foster families (Report to Congressional Requesters 18–376)*. https://www.gao.gov/assets/gao-18-376.pdf

Vanderfaeillie, J., Goemans, A., Damen, H., Van Holen, F., & Pijnenburg, H. (2018). Foster care placement breakdown in the Netherlands and Flanders: Prevalence, precursors, and associated factors. *Child & Family Social Work*, *23*(3), 337–345. https://doi.org/10.1111/cfs.12420

Vanderfaeillie, J., Gypen, L., West, D., & Van Holen, F. (2020). Support needs and satisfaction of Flemish foster parents in long-term foster care: Associated characteristics of foster children, foster parents and foster placements. *Children and Youth Services Review*, *113*, 104990. https://doi.org/10.1016/j.childyouth.2020.104990

Vanderfaeillie, J., Van Holen, F., Carlier, E., & Fransen, H. (2018). Breakdown of foster care placements in Flanders: Incidence and associated factors. *European Child & Adolescent Psychiatry*, *27*(2), 209–220. https://doi.org/10.1007/s00787-017-1034-7

Vasileva, M., & Petermann, F. (2018). Attachment, Development, and Mental Health in Abused and Neglected Preschool Children in Foster Care: A Meta-Analysis. *Trauma, Violence, & Abuse*, *19*(4), 443–458. https://doi.org/10.1177/1524838016669503

Vig, S., Chinitz, S., & Shulman, L. (2005). Young Children in Foster Care: Multiple Vulnerabilities and Complex Service Needs. *Infants & Young Children*, *18*(2), 147–160. https://doi.org/10.1097/00001163-200504000-00007

Vreeland, A., Ebert, J. S., Kuhn, T. M., Gracey, K. A., Shaffer, A. M., Watson, K. H., Gruhn, M. A., Henry, L., Dickey, L., Siciliano, R. E., Anderson, A., & Compas, B. E. (2020).

Predictors of placement disruptions in foster care. *Child Abuse & Neglect*, *99*, 104283. https://doi.org/10.1016/j.chiabu.2019.104283

Wen, B. (2022). The Causal Effect of Growing up in a Two-Parent Household on Child's Adult Earnings. *Journal of Business and Economic Studies*, *26*(1), 23–62. https://doi.org/10.53462/CVMZ1995

West, D., Luys, E., Gypen, L., Van Holen, F., & Vanderfaeillie, J. (2023). Behavior problems in foster care, systematic review of associated factors. *Children and Youth Services Review*, *155*, 107240. https://doi.org/10.1016/j.childyouth.2023.107240

Whenan, R., Oxlad, M., & Lushington, K. (2009). Factors associated with foster carer well-being, satisfaction and intention to continue providing out-of-home care. *Children and Youth Services Review*, *31*(7), 752–760. https://doi.org/10.1016/j.childyouth.2009.02.001

Wildeman, C., & Emanuel, N. (2014). Cumulative risks of foster care placement by sge 18 for U.S. children, 2000–2011. *PLoS ONE*, *9*(3), e92785. https://doi.org/10.1371/journal.pone.0092785