ABSTRACT

The Interaction of Friendship Difficulty and Foster Status and its Association with Mental Health

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Children in foster care are disproportionately affected by mental health conditions. Similarly, children in foster care are more likely to have difficulty with friendships. However, it is unclear how these experiences interact with one another. In this paper, I explore the interaction between friendship difficulty and foster status and how this interaction associates with mental health status. I use data from the National Survey of Childhood Health 2016-2018 combined waves to analyze a sample of 117,718 children ages 6-17 in a series of logistic regressions. I find that being a child in foster care and having difficulty in friendship are significantly associated with having a mental health condition. Additionally, I find that having difficulty in friendship has a different relationship with the mental health of children in foster care compared to all other children. I discuss implications of these findings and how future research can further explore this topic.

The Interaction of Friendship Difficulty and Foster Status and its Association with Mental Health

by

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TABLE OF CONTENTS

LIST OF FIGURES v

LIST OF TABLES vi

ACKNOWLEDGMENTS vii

DEDICATION viii

CHAPTER ONE 1
Introduction 1
Introduction to the World of Children in Foster Care 1

CHAPTER TWO 3
Literature Review 3

CHAPTER THREE 12
Methods 12
Data 12
Variable Measures 13

CHAPTER FOUR 16
Results 16

CHAPTER FIVE 25
Discussion and Conclusion 25

BIBLIOGRAPHY 34

LIST OF FIGURES

Figure 1. Predicted Probabilities for Mental Health Condition and Friendship Difficulty……24

LIST OF TABLES

Table 1. Means and Proportions for Sample Children, NSCH 2016-2018........................18

Table 2. Multinomial Logistic Regression Model for Associations of Friendship Difficulty Among Full Sample of Children..22

Table 3. Odds Ratios for Associations with Mental Health Condition..............................23

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DEDICATION

To my foster siblings. You inspire me daily to use my profession as a means to better our world.

CHAPTER ONE

Introduction

Introduction to the World of Children in Foster Care

In the United States, approximately 1% (400,000) of children are in the foster care system at any given moment (Wildeman & Emanuel, 2014). Children are placed in the foster care system because they have experienced some form of abuse or neglect (U.S. Department of Health and Human Services, 2019). Because these experiences are traumatic, children in foster care are more likely to experience mental health conditions (Herrick & Piccus, 2005; De Bellis, 2001), poorer scores of marital happiness, and less intimate relationships with parental figures later in life (Cook, 1992).

Friendship is an integral part to childhood. It provides social support and acts as a resource for development (Newcomb & Bagwell, 1995; Parker et al., 1995). Children in foster care need friendship interaction just as the rest of children do. However, the unique circumstances of children in foster care deserve special attention when considering how friendship affects them and how friendship may differentially affect their mental health. Specifically, the relationship between friendship and mental health may differ for children in foster care given their experiences with social network disruption and foster care.

This study uses a national sample of American children to assess the association between having difficulty making and keeping friends and mental health outcomes among children in foster care and those not in foster care. Children in foster care

experience trauma that other children do not (Herrick & Piccus, 2005), which negatively impacts their mental health (Rosenfeld et al., 1997; McCann et al., 1996). Further, like the rest of the population, social relationships have a significant impact on the mental health of children in foster care (Oosterman et al., 2010; Güroğlu et al., 2007). While previous research has separately examined mental health outcomes and social relationships among children in foster care, there is insufficient work on whether the impact of friendship on mental health varies based on foster care status. Given the importance of social relationships for health outcomes (Shin et al., 2016), it is critical to assess the role of friendship on mental health for children in the foster care system who are vulnerable to poor health and disrupted social networks.

CHAPTER TWO

Literature Review

Children in Foster Care

According to the Child Welfare Information Gateway (2020), there are over 400,000 children in foster care in the U.S. While this number makes up roughly 1% of children in the country, a recent study found that about 5-6% of children will be placed in foster care at some point (Wildeman & Emanuel, 2014). According to government reports, most children are placed into the foster care system because they are neglected, their parents abuse drugs, their caretaker can no longer care for them, or they have endured physical abuse (U.S. Department of Health and Human Services, 2019). Children can be placed in a variety of settings that make up the foster system including foster family homes, relatives' homes, institutions, and group homes, with the majority living in foster family and relatives' homes (Child Welfare Information Gateway, 2020).

As reported by the Child Welfare Information Gateway (2020) in 2018, the sociodemographic characteristics of children in foster care differ from children who are not in foster care. In terms of race and ethnic composition 44% of children in foster care were White, 23% were Black, 21% were Hispanic/Latinx, and 11% were of another race/ethnicity. The median age of children in the foster system was 7.6 years old. In addition, 52% of children in foster care were male while 48% were female.

Health of Children in Foster Care

In terms of health status, children in foster care have worse physical and mental health compared to other children, including children who are equally disadvantaged in terms of poverty and trauma but are not in the foster care system (Turney & Wildeman, 2016; Halfon et al., 1995). Specifically, Turney and Wildeman (2016) found that children in foster care are much more likely to report depression, anxiety, and behavioral problems among other health conditions. These conditions, along with poor physical health, were explained in part by exposure to risk factors as a result from being in an unstable home environment (Harden, 2004.)

Child Development and Children in Foster Care

There is an abundance of literature in the field of child development stating that a healthy childhood is critical for a healthy future. This period is a formative time for the brain as it develops processes that can later affect physical health, mental health, attachment, and social skills among other health experiences (Harden, 2004). Therefore, the events that occur during childhood have a lasting impact on later life outcomes (Haas, 2007; Case et al., 2005).

Children who have been in foster care for any amount of time have a unique experience of childhood development. All children in foster care have experienced some form of trauma because they were taken from or lost their primary caregiver and were put in the care of the state. This event alone can result in anxiety, grief, guilt, and loss of identity (Herrick & Piccus, 2005). Network disruption is one way of categorizing such events, as children placed in foster care are suddenly removed from their social network (Perry, 2006). This network disruption has a strong negative effect on mental health

outcomes (Brown, Harris, & Copeland, 1977; Paykel, 1978). Some literature concludes that network disruption affects mental health because of an individual's loss of social support and their network connections (Bilge & Kaufman, 1983; Brown et al., 1977; Menaghan, 1999); this is especially pertinent to the situation of children in foster care who have experienced significant disruptions in their social relationships.

Furthermore, research has shown that children who experience trauma are more likely to have trouble processing their emotions in an appropriate manner (De Bellis, 2001), making it difficult for them to process the stressful events that they have experienced. This makes them more susceptible to further experiences of trauma and affects their mental cognition (Gunnar, 1998; Rosenfeld et al., 1997). It is common for children in the foster care system to lag behind their peers developmentally because of their traumatic experiences during their formative years of childhood development (Committee on Early Childhood, Adoption and Dependent Care, 2002). Specifically, their adverse experiences can contribute to poor social skills and mental health conditions (Harden, 2004). Events outside of their control can set these vulnerable children on a trajectory towards poor relationships, health, and education as well as criminal behavior and general discontentment as a result of the same risk factors that contributed to their placement into the foster system (Cook, 1992; Barth, 1990). For example, children in foster care who were exposed to illicit substances in the womb have higher risk of mental health issues in their youth, regardless of the age at which they entered foster care (Nygaard et al., 2020).

Mental Health of Children in Foster Care

Because children in foster care have such unique challenges during their developmental years, their mental wellbeing in childhood deserves special consideration. Their exposure to traumatic events and poor environments at a young age makes them more vulnerable to mental health problems and mental illness (Halfon, Mendonca, and Berkowitz, 1995; McCann et al., 1996). They are exposed to the trauma of rejection and instability in their lives before they are placed in foster care (Rosenfeld et al., 1997), as over 90% of foster placements are a result of abuse or neglect by their parents (Pecora et al., 2003). This trauma affects foster children in significant ways. In fact, a 2004 report found that 47.9% of a sample of at-risk youth (including, but not limited to, foster children) that were part of a child welfare investigation had significant emotional or behavioral problems (Burns et al., 2004). Fourteen percent of children in a study of children that came in contact with the child welfare system (children in foster care or children at risk of being placed in foster care) were reported to have depression, anxiety, an eating disorder, or another emotional problem, with females being more likely to report any of these conditions than males (NSCAW II, 2019); 7.8% of the same sample had a clinical score on the Children's Depressive Inventory compared to the national estimate of 3.7% of children, and 8.6% of the sample was in clinical range for the Posttraumatic Stress Scale. Compared to adults who never experienced foster care, adults that have aged out of the foster care system report having lower scores of life happiness, self-esteem, marital satisfaction, and parental relationships with higher frequency of depression and social isolation, all of which influence mental health status (Cook, 1992).

Furthermore, being in foster care can have a negative impact on personal identity development, which in turn, can lead to feelings of isolation and a devaluation of self (Kools, 1997; Dansey et al., 2019). Moreover, the stigma associated with being in the foster care system can impact children's identity formation. Research shows that this stigma is often internalized by children in foster care who are avoiding processing their status of being in foster care out of fear that it may lead to bullying or other negative social interactions (Dansey et al., 2019). In one study, Dansey and colleagues found that children in foster care tend to keep their foster status a secret from their peers, potentially resulting in added stress and anxiety. Rather than keeping their foster status private as a way of coping with their reality, some children may choose to cope through peer support. Peer support is especially helpful when it comes from another child in foster care, which provides a sense of connection and safety (Rogers, 2017).

Peer Relationships

It is established in the literature that social relationships can have a large impact on the mental health status of all individuals (Kesslerand & McLeod, 1985; Pescosolido & Levy, 2002). Furthermore, studies show that children in foster care are much more likely to experience feelings of social isolation due to their unique experiences and status as a child in foster care (Cook, 1992) and therefore can have trouble socially integrating at times. Despite these challenges, peer relationships remain vital for the development and mental health functioning of all children (Parker et al., 1995; Clark & Drewry, 1985; Newcomb & Bagwell, 1995). Peer relationships are especially important for children in foster care (Price & Brew, 1998), even though children in foster care are more likely to

have social behavioral tendencies that may deter peer relationships (Burns et al., 2004; Cicchetti et al., 1992; Price & Brew, 1998).

Childhood friendship has the capability to shape social, emotional, and cognitive development among youth (Newcomb & Bagwell, 1995). Furthermore, childhood friendship plays an important role in development because youth are easily influenced by their peers (Maxwell, 2002; Steinberg & Scott, 2003), making friendship and peer relations vital to this period of development that is directly tied to outcomes in adulthood (Cook, 1992). Because of the importance of these relationships, peer relationships should be considered when analyzing mental health outcomes among children, especially for those in foster care.

Research shows that children react negatively to peers that misbehave and that children actively show signs of disliking deviant peers (DeLawyer & Foster, 1986). This makes children in foster care more likely to have poor peer relationships because these children are more likely to demonstrate deviant behavior (Cicchetti et al., 1992) and are unlikely to change their negative reputation in their peer group (Coie & Dodge, 1983; Price & Dodge, 1989). Children in foster care are also more likely to reproduce their social position in a new group (Coie & Kupersmidt, 1983), meaning that once they develop a negative reputation, it will stick with them from setting to setting. For example, a child could reproduce their negative reputation one foster placement to the next, or from home to a foster placement. Further, relational aggression, which children in foster care are more likely to exhibit (Price & Brew, 1998), significantly predicts a decline in mutual friendships (Johnson & Foster, 2005) and contributes to feelings of social isolation. Because of their past trauma and developmental hurdles, some children in

foster care have a more difficult time making and keeping friends (Leve, Fisher, & DeGarmo, 2007; Merritt & Snyder, 2015). Youth without friends are more likely to be rejected by their peers, further perpetuating the cycle of isolation and poor mental health (Güroğlu et al., 2007; Thompson et al., 2016).

However, children in foster care with positive peer relationships experience positive outcomes such as positive self-perception, family support, emotional perspective taking, self-confidence, and cooperation (Clark & Drewry, 1985; Güroğlu et al., 2007; Shook et al., 2009; Thompson et al., 2016). One study by Rhodes and colleagues (1999) looked at children in foster care who received goal-oriented social and emotional support from an assigned mentor as well as a control group who did not receive a mentor. They found that foster children who received support from a mentor exhibited increased self-esteem and had other sources of social support, while those who did not receive support from a mentor showed decreased self-esteem and no additional social support (Rhodes et al., 1999). Merritt and Snyder found that this sense of social support is a protective factor for childhood mental health conditions among at-risk youth (2015). Overall, friendships are particularly important during childhood development and may be even more so for children in foster care.

While some research has found that friendship has greater health benefits for the mental health of children in the foster system compared to those not (Merritt & Snyder, 2015; Leve et al., 2007; Güroğlu et al., 2007; Price & Brew, 1998), other research suggests that peer relationships may offer fewer health benefits for children in the foster system. The trauma that children in the foster system have lived through makes it difficult for them to process their emotions properly (De Bellis, 2001), which is a key

component to healthy relationships. Failure to process emotions could lead to weaker friendships, which in turn, provide fewer health benefits or protective effects to children in foster care. Cicchetti and colleagues (1992) found that experiences of trauma and maltreatment are associated with the development of poor mental representations of how relationships should look, as well as negative behaviors in friendships among children in foster care. These factors led to children in foster care undermining the importance of peer relationships altogether (see also Price & Brew, 1998). Children in foster care having a poor representation of friendship while also undermining the importance friendship could be a factor that leads to friendship difficulty not having as extreme of an impact on their mental health.

Additionally, the trauma experienced by children in foster care can lead to trouble with social skills (Harden, 2004). Without the tools to develop social skills, one can imagine that the benefits that other children experience from friendship are overwhelmed by the experience of being a foster child, especially considering other risk factors that children in foster care face like poverty, poor physical health, attachment disorders, mental health challenges, and poor social skills (Harden, 2004). Similarly, hindered development can directly lead to children in foster care not meeting developmental milestones, like developing important friendships, at the same rate as their peers (Committee on Early Childhood, Adoption and Dependent Care, 2002).

While one study found that all children in foster care reported to have a “best friend”, this friend was typically a sibling or another child in foster care in the same placement (Smith, 1995). This study showed that the fact that a best friend was a sibling, or mimicked a sibling by being in the same placement, affected the friendship, as sibling-

like relations often engender more negative behaviors like aggression, competition, and dominating. This finding suggests that the type of friendships children in foster care develop might differ from friendship typically expected to see in children. It is also possible that the benefits of social relationships are overwhelmed by the myriad of other risk factors associated with being in the foster system. In sum, friendship may have a differential impact on children's mental health outcomes who are in the foster care system given the trauma that these children have experienced, which in turn, impacts the health benefits typically associated with social relationships.

Hypotheses

This literature has led me to the following hypotheses:

H1: Children in foster care will have more difficulty making and keeping friends compared to children who are not in foster care.

H2: Children in foster care will be more likely to have a mental health diagnosis compared to children who are not in foster care.

Additionally, I propose competing hypotheses for whether foster care status moderates the association between friendship difficulty and mental health.

H3: The negative association between friendship difficulty and mental health will be especially acute for children in the foster care system compared to all other children.

H4: Alternatively, the negative association between friendship difficulty and mental health will be more modest for children in the foster care system compared to all other children.

CHAPTER THREE

Methods

Data

For this analysis, I am utilizing the 2016, 2017, and 2018 waves of the National Survey of Children's Health. These datasets were appended in STATA. All analyses were done using STATA version 16 software. This survey is a national survey of U.S. children's health funded by the Health Resources and Services Administration's Maternal and Child Health Bureau. It is an annual self-administered web or paper survey that uses an address-based sampling frame fielded by the U.S. Census Bureau. One child was randomly selected from each household to be the subject of the survey. The supplemental child questionnaire is completed by a parent or caregiver who has considerable knowledge about the child's health (Child and Adolescent Health Measurement Initiative, 2019).

The current analysis pools the 2016-2018 cross-sectional waves for a combined sample of 174,152 children with a weighted response rate of 40.7% in 2016, 37.4% in 2017, and 43.1% in 2018. Using a combined years dataset allows for larger cell sizes to analyze variables with small sample sizes, like children in foster care. A more detailed version of the sample and survey methodology can be found elsewhere (Child and Adolescent Health Measurement Initiative, 2017; Child and Adolescent Health Measurement Initiative, 2019).

I utilize listwise deletion for missing data. First, I limit the sample to 124,266 children between the ages of 6-17 since friendship difficulty was only asked of children in this age range. Among this sample of children ages 6-17, about 2% (2,447) had missing data on primary caregiver (PCG) relation which is used to determine each child's foster care status. Across the outcomes of interest, an additional 0.51% (624) were missing on mental health condition. Further, there were 1.48% (1,788) children missing data on friendship difficulty. Primary caregiver mental health condition then had 0.62% (739) missing cases. Finally, an additional 0.80% (950) had missing cases on covariates of interest, limiting the analytical sample to 117,718 children.

Variable Measures

This study has two outcomes of interest. The first is whether the focal child has a mental health condition. Caregivers of children ages 6-17 were asked if the subject child has ever been diagnosed by a healthcare provider with depression, anxiety, or behavioral/conduct problems. These questions were then combined into one measure indicating if the child had a mental/behavioral condition. For this analysis, this variable was coded as a binary variable, split between those who have ever been told by a medical professional that they have a mental/behavioral health condition (MH condition) as reported by a primary caregiver and those who have not.

The second outcome of interest is a categorical measure for whether the focal child has difficulty making and keeping friends. Specifically, caregivers reported if they perceive the subject child having a lot of difficulty, a little difficulty, or no difficulty (reference) making and keeping friends. Friendship difficulty is first used as an outcome variable to assess its relationship with being a child in the foster system when mental

health is not considered. This measure is used as an independent variable in the remainder of the analysis to assess the association between friendship difficulty and odds of having a mental health condition among the sample of children.

To assess children in foster care, I created a binary variable indicating whether the PCG is a foster parent or any other type of caregiver. The PCG filling out the survey is asked their relation to the focal child. Responses include biological/adoptive parent, stepparent, grandparent, foster parent, other relative, and other non-relative. The survey does not differentiate between biological and adoptive PCG, which prevents identifying children who were adopted out of foster care. Nonetheless, the current study is interested in assessing children currently in the foster care system. In sensitivity tests, I found no significant differences in the associations of interest for any other primary caregiver types (e.g., foster compared to other relative); therefore, I focus exclusively on children who have a foster primary caregiver versus all other types of PCG relation.

I control for a number of factors that could be related to children's mental health and confound the associations of interest. Sex of the subject child was coded using a binary classification of male (1) or female (0). Age of the subject child was measured in years, from 6 to 17 years of age. Race was coded as a categorical variable consisting of four mutually exclusive categories of non-Hispanic White (reference), non-Hispanic Black, Hispanic/Latinx, and non-Hispanic other, which includes those who reported having more than one race. The highest level of education achieved among PCGs was also considered given the impact of caregiver education on child health outcomes (Ross & Mirowsky, 2011). PCG education was measured as less than high school (reference), high school, some college (including an Associate degree) and college degree or higher.

In addition, I controlled for the mental health condition of the PCG who filled out the questionnaire because research has found that a caregiver's mental health is directly linked to their child's mental health (Bennet et al., 2007). Finally, I control for survey year since this dataset consists of three waves of data, collected from 2016-2018.

Analytic Plan

In Table 1, means, proportions, and differences in means tests between foster and non-foster populations are provided for all variables of interest. Table 2 provides a multinomial regression model showing the relationship between friendship difficulty and covariates of interest reported as relative risk ratios. Table 3 includes a series of logistic regression models to examine associations between friendship difficulty and odds of having a mental health condition after adjusting for demographic characteristics. I report these results as odds ratios (OR).

CHAPTER FOUR

Results

A Descriptive Picture of the Mental Health and Friendships of Children in Foster Care

Table 1 presents descriptive statistics for all variables of interest for children ages 6-17 in the analytic sample, as well as tests of differences between foster and non-foster children. In this sample, approximately 16% of children had ever been told by a doctor that they had a mental health condition including depression, anxiety, or a behavioral disorder. About 77% had no difficulty with friendship, and 19% had little difficulty with the remaining 5% having a lot of difficulty. The average age was around 12 years old. A majority of the children were White at 70%, 6% Black/African American, 11% Hispanic/Latinx, and 12% other race. In terms of PCG characteristics, 4% of PCGs reported having fair/poor mental health. The majority of PCGs had a college degree or higher at 61%, while 24% had some college, 13% graduated high school, and 2% completed less than high school.

The majority of children in the sample were not in the foster care system at the time of the survey in 2016-2018, while 0.2% (N=221) of the sample children were in the foster care system. Significant differences exist across several characteristics for children in the foster care system compared to children with other types of PCGs (hereafter referred to as children not in the foster care system). Among children not in the foster care system, 16% were reported to have a MH condition compared to a significant difference in children in foster care at 65% reporting a mental health condition. Most

children who were not in the foster care system had no difficulty making and keeping friends as reported by their PCG, at 76.7%; 18.5% had a little difficulty and 4.8% had a lot of difficulty. Among children in foster care, 34% had no difficulty making and keeping friends, 36% had a little bit of difficulty and 30% had a lot of difficulty. Age and sex were similar between children in the foster care system and children not in the system. The racial makeup of children in foster care differed significantly; 47% were White, 14% were Black/African America, 21% were Hispanic/Latinx and 18% reported another race. This significant difference is to be expected because children in foster care tend to come from lower income backgrounds where the racial makeup differs from the national makeup (Child Welfare Information Gateway, 2020).

Among PCGs of children not in the foster care system, 2.3% had less than high school degree, 13.1% completed high school, 23.6% had some college, and 60.9% had a college degree or higher. In contrast, PCGs of children in foster care had significant differences in education level. They were slightly less educated, with less participation in college. Most PCG's of children not in the foster care system reported having excellent or very good mental health, while 4% reported having fair or poor mental health. PCGs of children in the foster system had similar mental health conditions with 4% reported fair or poor mental health.

Table 1. Means and Proportions for Sample Children, NSCH 2016-2018 (N=117,718)

Variables	Full Sample		Foster Children		Non-Foster Children	
	N=117,718		N=221		N=117,497	
	Mean/ Prop.	Freq.	Mean/ Prop.	Freq.	Mean/ Prop.	Freq.
MH Condition	0.16	18,833	0.65	143	0.16**	18,690
Friendship Difficulty						
no difficulty	0.77	90,222	0.34	75	0.77***	90,147
little difficulty	0.19	21,801	0.36	80	0.18***	21,721
a lot of difficulty	0.05	5,695	0.30	66	0.05***	5,629
PCG MH Status Fair/Poor	0.04	4,916	0.04		0.04	
Age	12.13		11.95		12.13	
Male	0.51	60,454	0.48		0.51	
Race						
White	0.70	82,974	0.47	103	0.71***	82,871
Black/African American	0.06	7,035	0.14	31	0.06***	7,004
Hispanic/Latinx	0.11	13,066	0.21	47	0.11***	13,019
Other	0.12	14,643	0.18	40	0.12***	14,603
Highest Level of Education: PCGs						
Less than high school	0.02	2,761	0.02	5	0.02	2,756
High school	0.13	15,481	0.20	45	0.13***	15,436
Some college	0.24	27,852	0.29	65	0.24***	27,787
College degree or higher	0.61	71,624	0.48	106	0.61***	71,518

*** p<0.001, ** p<0.01, * p<0.05 (Foster Children vs. Non-Foster Children)

Friendship Difficulty and Being a Child in Foster Care

Table 2 presents a multinomial logistic regression model predicting relative risk ratios (RRR) of friendship difficulty among children after adjusting for child and PCG covariates. This fully adjusted model uses friendship difficulty as the outcome to assess the association between friendship difficulty and foster status before mental health is taken into account. No difficulty making and keeping friends is used as the base category to compare to a little and a lot of difficulty. Compared to non-foster children, children in the foster care system have nearly five times (RRR: 4.80) the relative risk of having a little difficulty making and keeping friends than having no difficulty. Further, compared to children not in the foster care system, children in the foster care system have sixteen times (RRR: 16.11) the relative risk of having a lot of difficulty making and keeping friends than having no difficulty. Overall, Table 2 shows that children in foster care experience more difficulty in friendships compared to children who are not in foster care.

Mental Health and Being a Child in Foster Care

Table 3 presents odds ratios (OR) from a series of logistic regressions. Each model controls for sex, age, race, PCG education and mental health, and survey year. Sex, age, and PCG education are significantly associated with odds of having a mental health condition throughout the models. For example, male children have higher odds of having a mental health condition compared to their female counterparts, while age is positively associated with a reported mental health condition. This is to be expected as previous research has found associations between gender (Afifi, 2007; Macintyre, Hunt, & Sweeting, 1996), age (Keyes & Westerhof, 2012) and caregiver education (Ross & Mirowsky, 2011) with mental health outcomes.

Model 1 of Table 3 shows that compared to all other children, children in foster care had almost 11 times the odds (OR: 10.86) of having a MH diagnosis, taking into account all control variables. This model provides support for H2 and confirms conclusions from previous research that children in foster care have worse mental health compared to their non-foster counterparts (Halfon, Mendonca & Berkowitz, 1995; Harden, 2004).

Model 2 removes the indicator for foster care status and adds the measure for friendship difficulty. Compared to those who have no difficulty making and keeping friends, those who have a little difficulty have over five times the odds (OR: 5.43) of having a mental health condition after adjusting for child and PCG characteristics. Further, those who have a lot of difficulty making and keeping friends have nearly 27 times the odds (OR: 26.95) of having a mental health condition.

Model 3 includes all child and PCG characteristics, including children's foster care status and friendship difficulty. Being a child in foster care and all levels of friendship difficulty have a significant association with mental health condition, controlling for all independent variables.

In model 4, I add an interaction term between foster care status and friendship difficulty. This interaction allows me to assess whether foster care status moderates the association between friendship difficulty and mental health. Overall, the effect of friendship difficulty varies across a child's foster status. Specifically, among those who have a lot of difficulty making friends, children in foster care have 7.5 times the odds (OR: 7.59) of having a MH condition than children not in the foster system who have no difficulty making friends. With an interaction term less than one indicating a negative

association, the effect of foster care status on the odds of having a mental health diagnosis is about 80% smaller among children who have a lot of difficulty making friends. In other words, having difficulty in friendship does not affect children in the foster system's mental health in the same way that it affects children who are not in the foster system.

I depict this relationship in Figure 1, which plots the predicted probability of having a mental health condition across levels of friendship difficulty and foster status. The figure shows that relative to all other children, children in the foster care system have a higher probability of a mental health diagnosis across all levels of friendship difficulty (ranging from no difficulty to a lot of difficulty). The figure also demonstrates a weaker relationship between friendship difficulty and mental health among children in the foster care system compared to children not in the foster systems. In other words, friendship difficulty does not have as large of an association with the mental health status of foster children as it does with the mental health of children who are not in the foster system.

Table 2. Multinomial Logistic Regression Model for Associations of Friendship Difficulty Among Full Sample of Children (Relative Risk Ratios, N= 117,718)

Variables	A Little Difficulty vs. No Difficulty		A Lot of Difficulty vs. No Difficulty	
	RRR	(95% CI)	RRR	(95% CI)
Foster Child	4.80***	(3.49, 6.58)	16.11***	(11.49, 22.60)
Male	1.02	(0.99, 1.05)	1.54***	(1.46, 1.63)
Race				
White(reference)				
Black	0.67***	(0.62, 0.71)	0.78***	(0.69, 0.87)
Hispanic/Latinx	0.89***	(0.84, 0.93)	0.93	(0.85, 1.01)
Other	0.90***	(0.86, 0.95)	0.88**	(0.80, 0.96)
PCG MH	2.73***	(2.56, 2.91)	5.83***	(5.35, 6.35)
Age	1.03***	(1.02, 1.03)	1.07***	(1.06, 1.08)
Highest Level of Education: PCGs				
Less than high school (reference)				
High school	0.98	(0.88, 1.09)	1.08	(0.89, 1.31)
Some college	1.06	(0.96, 1.18)	1.29**	(1.07, 1.55)
College degree or higher	0.96	(0.87, 1.07)	1.02	(0.85, 1.23)
Constant	0.17***	(0.15, 0.19)	0.02***	(0.01, 0.02)

Note: Model includes control for survey year.
*** p<0.001, ** p<0.01, * p<0.05

Table 3. Odds Ratios for Associations with Mental Health Condition

	Model 1		Model 2		Model 3		Model 4	
MH Condition	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Foster Child	10.86***	(8.2, 14.67)			5.63***	(4.08, 7.78)	7.59***	(4.76, 12.12)
Friendship Difficulty								
No difficulty (reference)								
A little difficulty			5.43***	(5.23, 5.64)	5.41***	(5.21, 5.62)	5.41***	(5.21, 5.62)
A lot of difficulty			26.95***	(25.29, 28.73)	26.65***	(25.0, 28.41)	26.82***	(25.16, 28.6)
Friendship Difficulty#Foster Child								
A little friendship difficulty#foster child							0.79	(0.40, 1.57)
A lot of friendship difficulty#foster child							0.29**	(0.13, 0.65)
PCG MH Status	1.398***	(3.81, 4.3)	2.63***	(2.45, 2.82)	2.64***	(2.46, 2.83)	2.64***	(2.46, 2.83)
Male	1.12***	(1.1, 1.17)	1.05**	(1.01, 1.09)	1.05**	(1.01, 1.09)	1.05**	(1.01, 1.09)
Age	1.05***	(1.04, 1.05)	1.04***	(1.03, 1.04)	1.04***	(1.03, 1.04)	1.04***	(1.03, 1.04)
Race								
White (reference)								
Black/African American	0.82***	(0.76, 0.88)	0.95	(0.88, 1.02)	0.94	(0.87, 1.01)	0.94	(0.87, 1.01)
Hispanic/Latinx	0.81***	(0.76, 0.85)	0.82***	(0.77, 0.87)	0.81***	(0.77, 0.86)	0.81***	(0.77, 0.86)
Other	0.71***	(0.67, 0.75)	0.71***	(0.66, 0.75)	0.7***	(0.66, 0.74)	0.70***	(0.66, 0.74)
Highest Level of Education: PCGs								
Less than high school (reference)								
High school	1.00	(0.89, 1.12)	0.99	(0.88, 1.12)	0.99	(0.87, 1.11)	0.98	(0.87, 1.11)
Some college	1.10	(0.99, 0.23)	1.05	(0.93, 1.18)	1.04	(0.93, 1.17)	1.04	(0.93, 1.17)
College degree or higher	0.87*	(0.78, 0.97)	0.86**	(0.76, 0.96)	0.85**	(0.76, 0.96)	0.85**	(0.76, 0.96)
Constant	0.10***	(0.09, 0.11)	0.06***	(0.05, 0.07)	0.06***	(0.05, 0.07)	0.06***	(0.05, 0.07)

All models include controls for survey year.

*** p<0.001, ** p<0.01, * p<0.05

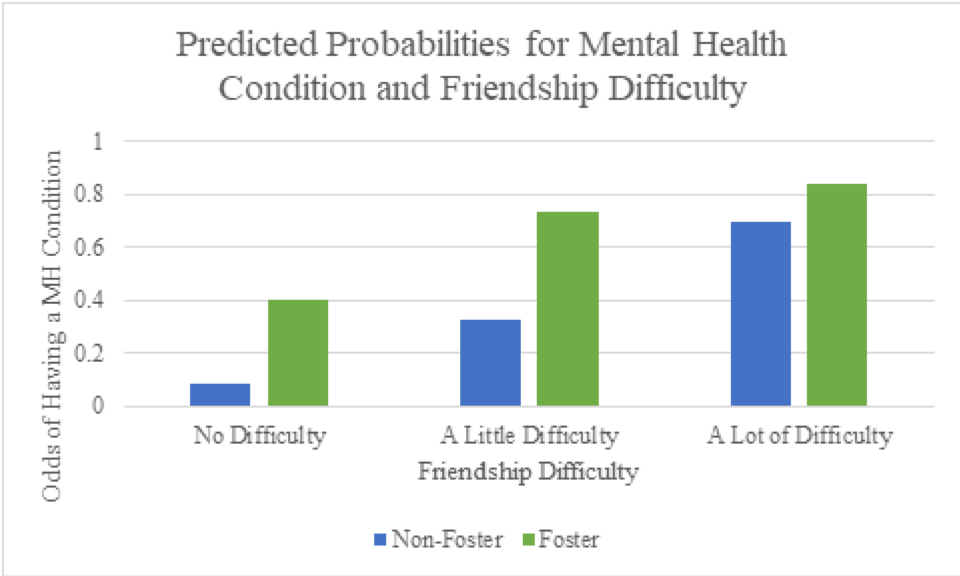

Figure 1: Predicted Probabilities for Mental Health Condition and Friendship Difficulty

CHAPTER FIVE

Discussion and Conclusion

Discussion

This study sought to explore the interaction between friendship difficulty and foster status and how this interaction associates with mental health status. The findings suggest that friendship has a different relationship with the mental health of children in foster care than it does with other children that is shown in previous research on friendship and foster care status (Merritt & Snyder, 2015; Price & Brew, 1998; Thompson et al., 2016). The findings emphasize that foster status plays a unique role in how friendship impacts mental health outcomes among children. This finding does not necessarily indicate that friendship is not as important for children in foster care, as it may seem to suggest. Friendship is vital for all children and can have other protective factors for children in foster care (Price & Brew, 1998). This study shows that friendship does protect against mental health conditions for children in foster care. However, the association between friendship difficulty and having a mental health condition is weaker for children in foster care. This suggests that children in foster care as well as their PCG may view friendship differently than other children for a variety of reasons.

This study contributes to the literature by using a sample that compares children in the foster care system to all other children, making it possible to analyze the differential effect that friendship difficulty has on the mental health of both populations. Additionally, this study provides a new perspective on the friendships of foster children.

The results from my analysis confirm that children in foster care are more likely to have difficulty making and keeping friends compared to other children, as perceived by their primary caregiver. As previously noted, children in foster care have been through considerably more trauma in childhood than their peers. This trauma can make it difficult to process emotions (De Bellis, 2001; Gunnar, 1998; Oosterman et al., 2010) and social relationships (Harden, 2004; Kools, 1997; Price & Brew, 1998), both important parts of friendship. These difficulties can lead to struggles in friendship heightened among children in foster care.

This analysis also shows that children in foster care are more likely to be diagnosed with a mental health condition compared to children who are not in the foster care system. This finding is also supported by previous research which finds that being a child in foster care oftentimes has a significant impact on children's mental health status, treatment, and social abilities. Children in foster care have a different story from most starting at an early age with all experiencing maltreatment, neglect, or abuse from their caregivers before entering foster care (Pecora et al., 2003). From that point on, their trauma is likely to continue and to have a negative impact on their health (Cook, 1992; Gunnar, 1998; Harden, 2004).

Furthermore, the finding in this analysis that children who have no difficulty making friends have better mental health outcomes than those who have difficulty in friendship is also supported by prior literature. Children experience many important forms of development that have a lasting impact on life outcomes (Case et al., 2005; Haas, 2007; Harden, 2004). The literature shows that adults that have aged out of the foster care system have poorer life outcomes (Cook, 1992; Haas, 2007). Other studies

have confirmed that foster care has a direct effect on certain adult behaviors and life conditions (Barratt, Appleton & Pearson, 2020; Shook et al., 2009; Case, 2005). Childhood, including peer relationships, plays a critical role in child development and impacts outcomes throughout the life course (Clark & Drewey, 1985; Güroğlu et al., 2007; Newcomb & Bagwell, 1995; Parker et al., 1995; Price & Brew, 1998). Friendship acts as a protective agent for the mental health and well-being of all children, and it could help to mitigate some of the challenges that children in the foster system may face later in life.

Analyses also show that children in foster care have higher levels of mental health conditions at every level of friendship difficulty. Furthermore, accounting for friendship difficulty did reduce the association between foster status and having a mental health condition. This demonstrates that children in foster care have high levels of mental health conditions despite friendship status, but friendship is indeed an important factor for the mental health of children in foster care. These findings suggest that there are contextual factors, such as placement duration, respondent, and view of friendship, to consider when thinking through the friendships of children in foster care.

This analysis shows that the mental health of children in foster care is affected differently than the mental health of all other children in the context of friendship. Specifically, while children in the foster system have higher levels of mental health conditions at every level of friendship difficulty, the increases in friendship difficulty do not impact mental health as much compared to children who are not in foster care. In other words, the association between friendship difficulty and mental health condition is weaker for foster youth who have a lot of difficulty making and keeping friends

compared to all other children. This finding deviates from previous research. Merritt and Snyder (2015), Price and Brew (1998) and Thompson et al. (2016) focused on the positive effects associated with friendship for foster children, while the current finding suggests that friendship has a very different relationship with the mental health of children in foster care, and therefore should be looked at in a new way.

Despite differences from previous research, the current study finds support for the relationship between mental health condition and friendship for all children, including children in foster care. In other words, it seems that there is something about being a child in foster care that alters the way friendship is viewed and therefore associated with mental health. Because children in foster care have more difficulty processing their emotions due to previous trauma (De Bellis, 2001; Gunnar, 1998), they may not have the capacity to process friendships in the same way that their peers do. This could cause them to have more trouble making and keeping friends. Alternatively, they could have more difficulty in friendship because of their trauma of abuse and neglect, potentially encouraging them to avoid or undermine close relationships (Cicchetti et al., 1992; Price & Brew, 1998). However, with the use of cross-sectional data in this study, the direction of causation is unknown, complicating how these relationships truly function. Future research would benefit from a study using longitudinal data in order to examine causal processes between friendship, mental health, and foster status over time.

Furthermore, foster parents may have a different role in orchestrating friendships compared to other parents. Because children in foster care are highly monitored by social workers, physicians, therapists among others, their foster parents receive a lot of suggestions or requirements for the health of their child (Stahmer et al., 2005). Foster

parents are given the responsibility to carry out these requirements, like therapy, play, exercise, or taking medications, given from these individuals. Encouraging friendship development may be a common suggestion for children in foster care. If friendship is being orchestrated by foster parents, it may feel inorganic or forced, and constrained to the child. This could result in the child having no interest, or the friendship having less beneficial effects due to the superficial nature of the relationship. In addition, this type of friendship may create a perspective of friendship that differs from the mainstream definition. Because many children in foster care may have and constrained friendships, they may not value these relationships to the same extent or think that they are as important as other children do. Alternatively, the trauma that they experience could alter their view of friendship. Because all children in foster care have experienced network disruption (Perry 2006), they may respond to new friendships in a different way. Children in foster care may be holding on to their past friendships, or they may avoid forming new friendships in fear of another network disruption. Taken together, children in foster care may process and view their friendships differently compared to other children, and this may alter how peer relationships relate to their mental health.

While the National Survey of Children's health dataset is ideal for the analysis at hand, there are differences worth noting between averages of key variables and national averages. Within the NSCH sample, 16% of children not in foster care were reported to have a mental health condition compared to a reported 18-22% national average (NCSL, 2019). This difference could be due to the fact that the NSCH only includes three types of mental health conditions in this measure (anxiety, depression, and emotional/behavioral problems) while there are many more diagnoses that make up mental health conditions.

Further, in my analytical sample, 65% of children in foster care were diagnosed with a mental health condition, while it is estimated that nearly 80% of foster children have significant mental health issues (NCSL, 2019). This discrepancy is likely also due to the type of mental health measures. Furthermore, only 0.2% of the sample consisted of children in foster care, while the national average is 1%. This difference is most likely because the population of children in foster care is a hard-to-reach population, as they frequently move between placements and can be in a variety of placement types (i.e. a group home). For example, about 18% children in foster care are placed in non-traditional settings like institutions and group homes (Child Welfare Information Gateway, 2021), while the survey only went out to households. The smaller sample size of children in foster care also limited statistical power. Nonetheless, a national-level analysis on mental health and friendship that compares children in foster care with all other children has not previously been done, making this an ideal dataset for this study. Therefore, this analysis makes an important contribution to the literature of the mental health of children in foster care.

Scholars should keep in mind several limitations in this study. The NSCH is completed by a PCG, not the focal child. This could lead to bias in how survey questions are answered or inaccurate data for several reasons. PCG response is more complicated for children in foster care. First, the NSCH does not collect information on how long foster youth have been in their current placement. Because we lack this information, there is no sense of how well a foster parent may know their child and therefore how accurate their responses are. Second, some foster parents may be motivated to paint a more dire picture of their child in hopes of receiving a higher reimbursement, as children perceived

as higher need typically receive a higher reimbursement intended for their care. This could result in higher levels of reported friendship difficulty among children in foster care.

Additionally, this analysis consists of children ranging from 6 to 17 years old. It was necessary to pool these ages together for analysis, but this may hide important age-related relationships with friendship difficulty and mental health. Factors like time in care, number of placements, and prolonged mental health challenges are also unknown. A larger sample of children in foster care would allow for separate analyses on young children versus teens. This would allow for a closer look at the types and frequencies of mental health conditions among more specific age groups and a more accurate interpretation of how these conditions are related to friendship.

A further limitation of this study is the mental health measure used. This measure only asks about diagnosis for specific mental health conditions, not severity. While this measure gives a black and white picture of children's mental health, future research would benefit from a mental health scale or a self-rated mental health measure. This would give more nuances in levels of mental health conditions and how they relate to friendship for children in foster care, as well as adding more accuracy in describing children's mental health status.

Finally, this study considers a single measure of friendship. A more in-depth questionnaire on types of friendships, number of friendships, confidence in friendships and other measures of social integration would give a more robust picture of the importance of friendship and social relations to children in foster care and the relationships they have with these children's mental health. Nonetheless, this dataset is

still best for the current analysis because it provides the opportunity to compare children in the foster care system with all other children within the same sample. In addition, it has measures of childhood mental health and friendship for all school-aged children in the sample, as well as important control variables for caregivers.

Because heightened rates of mental health conditions are already a concern for children in foster care and friendship is especially important for this vulnerable population, future research and policy should consider specific ways to improve the friendships of children in the foster system. Friendship is a key part of childhood and childhood development. More of an emphasis on the importance of friendship and social relationships among social workers, medical practitioners, teachers, and foster parents could lead to more careful attention to the role of friendship in the lives of these children and, in turn, better mental health outcomes for children in foster care. Children in foster care who have no difficulties making and keeping friends have a much lower probability of having a mental health condition. If friendship of children in foster care was more of a focus for the adults in the lives of children in foster care, the children may be more likely to develop and keep friendships, which could have positive effects on their mental health. Cognitive development and life outcomes of children in foster care could benefit greatly from research that encourages the development of friendship.

Conclusion

The results of this study demonstrate that having difficulty in friendship has a different relationship with the mental health of children in foster care compared to all other children. While previous work has looked at the importance of friendship for children in foster care (Leve et al., 2007; Merritt & Snyder, 2015; Price & Brew, 1998),

this study provides support for a competing argument that friendship may have a different relationship with mental health. Foster youth might have a unique way of processing and understanding the meaning of peer relationships, which in turn, influences how friendship relates to their mental health. Children in foster care's mental health is in a more fragile state than other children's mental health due to past trauma, and this can manifest in many ways. The findings imply that because children in foster care's mental health is fragile, and they are faced with many hurdles to their development, they may not have the capacity to invest in friendship in the same way that other children do. Therefore, having a lot of difficulty with friendships has a different relationship with the mental health of those in the foster system than one may see in all other children.

BIBLIOGRAPHY

Afifi, M. (2007). Gender differences in mental health. *Singapore Medical Journal, 48*(5), 385.

Bilge, B., & Kaufman, G. (1983). Children of divorce and one-parent families: Cross-cultural perspectives. *Family Relations*, 59-71.

Brock, Rebecca L., & Kochanksa, G. (2015). Decline in the quality of family relationships predicts escalation in children's internalizing symptoms from middle to late childhood. *Journal of Abnormal Child Psychology* 43(7), 1295-1308.

Brown, G., Harris, T., & Copeland, J. J. (1977). Depression and loss. *British Journal of Psychiatry, 130*(1), 1-18.

Burns, B. J., Phillips, S. D., Wagner, H. R., Barth, R. P., Kolko, D. J., Campbell, Y., & Landsverk, J. (2004). Mental health need and access to mental health services by youths involved with child welfare: A national survey." *Journal of the American Academy of Child & Adolescent Psychiatry, 43*(8), 960-970.

Casanueva, C., Wilson, E., Smith, K., Dolan, M., Ringeisen, H., & Horne, B. (2012). NSCAW II Wave 2 Report: Child well-being." *OPRE Report #2012-38, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services*.

Case, A., Fertig, A., & Paxson, C. (2005). The lasting impact of childhood health and circumstance. *Journal of Health Economics, 24*(2), 365-389.

Child and Adolescent Health Measurement Initiative. (2017). Fast facts: 2016 National Survey of Children's Health. *Data Resource Center, supported by Cooperative Agreement U59MC27866 from the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB).* Available at www.nschdata.org. Revised 11/02/17.

Child and Adolescent Health Measurement Initiative. (2019). Fast Facts: 2017-2018 National Survey of Children's Health. *Data Resource Center for Child and Adolescent Health, supported by Cooperative Agreement U59MC27866 from the U.S. Department of Health and Human Services, Health Resources and Services Administration's Maternal and Child Health Bureau (HRSA MCHB)*. Available at www.childhealthdata.org. Revised 10/7/2019.

Child Welfare Information Gateway. (2020). Foster care statistics 2018. *Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families, Children's Bureau*.

Cicchetti, D., Lynch, M., Shonk, S., & Manly, J. T. (1992). An organizational perspective on peer relations in maltreated children. *Family peer relationships: Modes of linkage* (pp. 345-384). Routledge.

Clark, M. L., & Drewry, D. (1985). Similarity and reciprocity in the friendships of elementary school children. *Child Study Journal, 15*(4), 251-264.

Coie, J. D., & Kupersmidt, J. (1983). A behavioral analysis of emerging social status in boys' groups. *Child Development, 54*(6),1400-1416.

Coie, J. D., & Dodge, K. A. (1983). Continuities and changes in children's social status: A Five-Year Longitudinal Study. *Merrill-Palmer Quarterly (1982-)*, 261-82.

Committee on Early Childhood, Adoption and Dependent Care. (2002). Health care of young children in foster care. *Pediatrics, 109*(3), 536-541.

Cook, S. K. (1992). *Long-term consequences of foster care for adult well-being* (Doctoral dissertation, The University of Nebraska-Lincoln).

Keyes, C. L. M., & Westerhof, G. J. (2012). Chronological and subjective age differences in flourishing mental health and major depressive episode. *Aging & Mental Health* 16(1):67-74.

Dansey, Diane, Danielle Shbero, and Mary John. 2019. "Keeping Secrets: How Children in Foster Care Manage Stigma." *Adoption & Fostering* 43(1):35-45.

De Bellis, Michael D. 2001. "Developmental Traumatology: The Psychobiological Development of Maltreated Children and Its Implications for Research, Treatment, and Policy." *Development and Psychopathology* 13(3):539-564.

DeLawyer, David D. and Sharon L. Foster. 1986. "The Effects of Peer Relationship on the Functions of Interpersonal Behaviors of Children." *Journal of Clinical Child Psychology* 15(2):127-133.

Gunnar, Megan R. 1998. "Quality of Early Care and Buffering of Neuroendocrine Stress Reactions: Potential Effects on the Developing Human Brain*." Preventive Medicine* 27(2):208-211.

Güroğlu, Berna, Cornelius FM Van Lieshout, Gerbert JT Haselager, and Ron HJ Scholte. 2007. "Similarity and Complementarity of Behavioral Profiles of Friendship Types and Types of Friends: Friendships and Psychosocial Adjustment." *Journal of Research on Adolescence* 17(2):357-386.

Haas, Steven A. 2007. "The Long-term Effects of Poor Childhood Health: An Assessment and Application of Retrospective Reports." *Demography*, 44(1):113-135.

Halfon, Neal, Ana Mendonca, and Gale Berkowitz. 1995. "Health status of Children in Foster Care: The Experience of the Center for the Vulnerable Child." *Archives of Pediatrics & Adolescent Medicine* 149(4):386-392.

Harden, Brenda Jones. 2004. "Safety and Stability for Children in foster care: Developmental Perspective." *The Future of Children* 31-47.

Johnson, Douglas R. and Sharon L. Foster. 2005. "The Relationship Between Relational Aggression in Kindergarten Children and Friendship Stability, Mutuality, and Peer Liking." *Early Education & Development* 16(2):141-160.

Kates, Wendy Glockner, Rebecca L. Johnson, Mary W. Rader, and Frederick H. Strieder. 1991. "Whose Child is This? Assessment and Treatment of Children in Foster Care." *American Journal of Orthopsychiatry* 61(4):584-591.

Kessler, Ronald C. and Jane D. McLeod. 1985. "Social Support and Mental Health in Community Samples." *Social Support and Health* 219–240. Academic Press.

Kools, Susan M. 1997. "Adolescent Identity Development in Foster Care." *Family Relations* 263-271.

Leve, Leslie D., Philip A. Fisher, and David S. DeGarmo. 2007. "Peer Relations at School Entry: Sex Differences in The Outcomes of Foster Care." *Merrill-Palmer quarterly (Wayne State University. Press)* 53(4):557.

Macintyre, Sally, Kate Hunt, and Helen Sweeting. 1996. "Gender Differences in Health: Are Things Really as Simple as They Seem?" *Social Science & Medicine* 42(4):617-624.

Maxwell, Kimberly A. 2002. "Friends: The Role of Peer Influence Across Adolescent Risk Behaviors." *Journal of Youth and Adolescence* 31(4):267-277.

McCann, Jacinta B., Anthony James, Sylvia Wilson, and Graham Dunn. 1996. "Prevalence of Psychiatric Disorders in Young People in the Care System." *Bmj,* 313(7071):1529-1530.

McLoyd, Vonnie C. 1998. “Socioeconomic Disadvantage and Child Development.” *American Psychologist* 53(2):185.

Menaghan, Elizabeth G. 1999. “Social Stressors in Childhood and Adolescence.” A. V. Horwitz & T. L. Scheid (Eds.), *A handbook for the study of mental health: Social contexts, theories, and systems*. Cambridge University Press.

Merritt, Darcy H. and Susan M. Snyder. 2015. Correlates of Optimal Behavior Among Child Welfare-Involved Children: Perceived School Peer Connectedness, Activity Participation, Social Skills, and Peer Affiliation. *American Journal of Orthopsychiatry* 85(5):483.

National Conference of State Legislatures. 2019. “Mental Health and Foster Care.” Washington, DC: National Conference of State Legislatures. Retrieved June 17, 2021 (https://www.ncsl.org/research/human-services/mental-health-and-foster-care.aspx).

Newcomb, Andrew F. and Catherine L. Bagwell. 1995. “Children's Friendship Relations: A Meta-analytic Review.” *Psychological Bulletin* 117(2):306.

Nygaard, Egil, Kari Slinning, Vibeke Moe, Anders Fjell, and Kristine Walhovd. 2020. “Mental Health in Youth Prenatally Exposed to Opioids and Poly-drugs and Raised in Permanent Foster/Adoptive Homes: A Prospective Longitudinal Study.” *Early Human Development* 140:104910.

Oosterman, Mirjam and Carlo Schuengel. 2008. “Attachment in Children in foster care Associated with Caregivers' Sensitivity and Behavioral Problems.” *Infant Mental Health Journal: Official Publication of the World Association for Infant Mental Health* 29(6):609-623.

Oosterman, Mirjam, J. Clasien De Schipper, Philip Fisher, Mary Dozier, and Carlo Schuengel. 2010. “Autonomic Reactivity in Relation to Attachment and Early Adversity Among Children in foster care.” *Development and Psychopathology* 22(1):109.

Parker, Jeffrey G., Kenneth H. Rubin, Stephen A. Erath, Julie C. Wojslawowicz, and Allison A. Buskirk. 2006. “Peer Relationships, Child Development, and Adjustment: A Developmental Psychopathology Perspective.” In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology: Theory and method:*419–493. John Wiley & Sons, Inc.

Paykel, Eugene S. 1978. Contribution of Life Events to Causation of Psychiatric Illness. *Psychological medicine* 8(2):245-253.

Pecora, Peter J., Jason Williams, Ronald C. Kessler, A. Chris Downs, Kirk O'Brien, Eva Hiripi, and Sarah Morello. 2003. "Assessing the Effects of Foster Care: Early Results from the Casey National Alumni Study." *The Foster Care Alumni Studies*. Seattle, WA: Casey Family Programs.

Pecora, Peter J., Peter S. Jensen, Lisa H. Romanelli, Lovie J. Jackson, and Abel Ortiz. 2009. "Mental Health Services for Children Placed in Foster Care: An Overview of Current Challenges." *Child welfare* 88(1):5–26.

Perry, Brea L. 2006. Understanding Social Network Disruption: The Case of Youth in Foster Care. *Social Problems* 53(3):371-391.

Pescosolido, Bernice A., and Judith A. Levy. 2002. "The Role of Social Networks in Health, Illness, Disease and Healing: The Accepting Present, The Forgotten Past, and the Dangerous Potential for a Complacent Future." *Advances in Medical Sociology* 8:3-28.

Price, Joseph M. and Valerie Brew. 1998. "Peer Relationships of Children in foster care: Developmental and Mental Health Service Implications." *Journal of applied developmental psychology* 19(2): 199-218.

Rhodes, Jean E., Wendy L. Haight, and Ernestine C. Briggs. 1999. "The influence of mentoring on the peer relationships of foster youth in relative and nonrelative care." *Journal of Research on Adolescence* 9(2):185-201.

Rogers, Justin. 2017. "'Different' and 'Devalued': Managing the Stigma of Foster-Care with the Benefit of Peer Support." *British Journal of Social Work* 47(4):1078-1093.

Rosenfeld, Alvin A., Daniel J. Pilowsky, Paul Fine, Marilyn Thorpe, et al. 1997. "Foster Care: An Update." *Journal of the American Academy of Child & Adolescent Psychiatry* 36(4):448-457.

Ross, Catherine E. and John Mirowsky. 2011. "The Interaction of Personal and Parental Education on Health." *Social Science & Medicine* 72(4):591-599.

Shin, Kyoung Min, Sun-mi Cho, Yun Mi Shin, and Kyung Soon Park. 2016. Effects of early childhood peer relationships on adolescent mental health: A 6-to 8-year follow-up study in South Korea. *Psychiatry investigation* 13(4)383.

Shook, Jeffrey J., Michael G. Vaughn, Christy Litschge, Karen Kolivoski, and Lisa Schelbe. 2009."The Importance of Friends Among Foster Youth Aging Out of Care: Cluster Profiles of Deviant Peer Affiliations." *Children and Youth Services Review* 31(2):284-291.

Smith, Maureen C. 1995. A Preliminary Description of Nonschool-Based Friendship in Young High-Risk Children. *Child Abuse & Neglect* 19(12):1497-1511.

Stahmer, Aubyn C., Laurel K. Leslie, Michael Hurlburt, Richard P. Barth, Mary Bruce Webb, John Landsverk, and Jinjin Zhang. 2005. "Developmental and Behavioral Needs and Service Use for Young Children in Child Welfare." *Pediatrics* 116(4):891-900.

Steinberg, Laurence and Elizabeth S. Scott. 2003. "Less Guilty by Reason of Adolescence: Developmental Immaturity, Diminished Responsibility, and the Juvenile Death Penalty." *American Psychologist* 58(12):1009.

Thompson, Heather M., Armeda S. Wojciak, and Morgan E. Cooley. 2016. "Self-esteem: A Mediator Between Peer Relationships and Behaviors of Adolescents in Foster Care." *Children and Youth Services Review* (66):109-116.

Turney, Kristin and Christopher Wildeman. 2016. "Mental and Physical Health of Children in Foster Care." *Pediatrics* 138(5):e20161118.

United States. Department of Health and Human Services. Office of Inspector General. 2005. "Children's Use of Health Care Services While in Foster Care: Common Themes." *Washington, D.C: Department of Health and Human Services, Office of Inspector General.*

U.S. Department of Health and Human Services. 2018. "Child Welfare Outcomes 2018. Report to Congress."

U.S. Department of Health and Human Services. 2019. T*he AFCARS report: Preliminary FY 2018 estimates as of August 22, 2019* (26).

Wildeman, Christopher and Natalia Emanuel. 2014. "Cumulative Risks of Foster Care Placement by Age 18 for US Children, 2000–2011." *PloS one* 9(3):e92785.