Reunification and Behavioral Problems of American Indian Children
in the Child Welfare System

A Dissertation
SUBMITTED TO THE FACULTY OF THE
UNIVERSITY OF MINNESOTA
BY

Ashley L. Landers

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

Sharon M. Danes, PhD

May, 2016

Acknowledgements

First, I want to thank my advisor, Dr. Sharon Danes, who moved mountains to create opportunities for me. She taught me the importance of conceptual precision as she provided round after round of feedback, which dramatically shaped the quality and contributions of this dissertation. She serves as a living example of the kind of person and the kind of academic that I want to be. I would not be here without her. Second, I want to thank the members of my committee: Drs. Traci LaLiberte, Tai Mendenhall, and Lindsey Weiler. Each of you contributed to my personal and professional development along this journey. Each of you have challenged me to become a better researcher and clinician. Third, I want to thank Dr. Jennifer Bellamy who was instrumental in teaching me how to work in the NSCAW data, as well as how to use propensity score matching. Dr. Bellamy has proven instrumental in the formulation and development of this dissertation. I also want to thank Dr. Sara Axtell for being the first person at the university to take personal interest in me. She instilled in me the importance of studying oneself. Her teachings have helped me reconnect to my roots and tap into previously undiscovered cultural teachings. I want to thank Sandy White Hawk who has faithfully served as my teacher. Sandy so graciously took me under her wing and invited me into this sacred space where what I have studied in books meets the real world of American Indian families.

On a personal note, I want to thank my grandfather, John Raymond Tyrrell, who willed my accomplishments into the world long before I ever saw his dreams to fruition. He embodied unconditional acceptance and love to me when I did not deserve it. I also want to thank my grandmother, who prayed and held her breath until I called to tell

her of my acceptance at the University of Minnesota. She, too, always believed in me. I also want to thank my parents, who in many ways, made all of this possible by the sacrifices they made in my debt. Thank you to my siblings who have loved and supported since birth. To the friends who have shepherded me intellectually and quietly called me away from my studies when needed. I do not deserve the things that I have received. I want to thank my maker for putting me on this path and making all things possible.

Dedication

This dissertation is dedicated to my grandparents, John Raymond Tyrrell and Shirley

Mae (Lenzen) Tyrrell.

Abstract

The two studies presented in this dissertation examine outcomes for American Indian children in the child welfare system (Study 1: $n = 456$, Study 2: $n = 3,498$). Both studies are grounded in Patterson's (2002) Family Adjustment and Adaptation Response theory and utilize baseline, 18-month, and 36-month follow-up data from the National Survey of Child and Adolescent Well-being. Each study used propensity score matching and multiple logistic regression, although Study 1 incorporated the Long-Term Foster Care sample and Study 2 used the Child Protective Services sample. ***Study 1's*** purpose was estimating the effect of race on reunification among American Indian, African American, and Caucasian children ages 2 – 15 years. Study findings suggested that reunification did not differ based on race after balancing on family demands and capabilities. ***Study 2's*** purpose was estimating the effect of race on the probability of displaying internalizing and externalizing behavioral problems among American Indian, African American, and Caucasian children ages 2 – 16. years Findings revealed that American Indian children had an increased probability for displaying clinically significant externalizing behavior problems at 36-month follow-up. These studies suggest that, although descriptively American Indian children are less likely to reunify and are more likely to display clinically significant behavioral problems, such findings are not explained by race alone after balancing family demands and capabilities.

Table of Contents

List of Tables

Reunification of American Indian Children in Long-Term Foster Care

An alarming number of children experience out-of-home placement (e.g., foster care) in the U.S. each year. Using the most recent data available from the U.S. Department of Health and Human Services, 254,162 total children were placed in foster care in 2012 (2013a). Following out-of-home placement, children formally exit the child welfare system via various paths to permanency including reunification, adoption, or guardianship. Reunification refers to the process of returning children in out-of-home placements to their families (Child Welfare Information Gateway, 2011) and reinstating custody to the parent(s). Reunification is the preferred permanency plan and the most common outcome (Child Welfare Information Gateway, 2011, 2012). Of the 240,000 children nationally who exited foster care in 2011, 143,000 (59.6%) were discharged to reunification (U.S. Department of Health and Human Services, 2013b). Reunification is the focus of this study.

Discharge to reunification is of great concern in some cultural communities, such as in the American Indian community. Entire generations of American Indian families have been disconnected as a result of relocation and systematic practices of child removal (Crofoot & Harris, 2012). In 1978, Congress passed the Indian Child Welfare Act (ICWA), which aims to keep American Indian children with their families. This act emerged from the alarming rates of American Indian children being removed from their homes by public and private agencies (Atwood, 2008). ICWA focuses on the return of American Indian children to their home nations and requires child welfare workers to

connect with American Indian Nations when working with American Indian children (Graham, 2008).

Despite the enactment of ICWA, out-of-home placement and reunification remain pressing issues in American Indian communities. Reunification is an essential component to rebuilding American Indian communities after efforts of forced assimilation, removal and relocation (Landers, Danes, & White Hawk, 2015). Although disproportionate out-of-home placement and reunification affects multiple minority communities (e.g., African Americans, American Indians), reunification is essential to the survival of American Indian cultures – a context that is uniquely specific to American Indians as compared to children of other races (e.g., African American, Caucasian). Although American Indians comprise a small percentage of the total U.S. population (1.7%) (Census, 2010 as cited in National Indian Child Welfare Association, 2014), they are overrepresented in the child welfare system (U.S. Department of Health and Human Services, 2013a) and their continued survival is dependent on family preservation and reunification. Preservation of American Indian cultures begins with protecting their most precious resource – American Indian children and families themselves (NICWA, 2014, "American Indian Children and Families", para. 1). Since reunification with family is a critical component to this cultural preservation, this study investigates the predictors of the probability of reunification.

Although reunification is critical for American Indian families, less is known about the reunification of American Indian children in comparison to children of other races, as American Indian children have, for the most part, been excluded from reunification research, often due to their small numbers. This study allows for

comparison of American Indian children to other more-studied racial groups (i.e., African American and Caucasian children). Despite the disproportionate representation of American Indian children in the child welfare system (U.S. Department of Health and Human Services, 2013a), there continues to be a dearth of literature on the outcomes of American Indian children and families following child welfare involvement, particularly following long-term foster care. Further, literature that does exist tends to concentrate on the predictors of out-of-home placement (Carter, 2009, 2010), rather than what happens to these children (e.g., reunification) following out-of-home placement. Thus, this study compares American Indian to Caucasian and African American children on a number of key characteristics.

Studies that focus on reunification outcomes that include American Indian children are geographically limited and no studies that have utilized a national sample exist to our knowledge. Studies examining the effect of race on reunification utilizing state or countywide data including American Indian children suggest they are less likely to reunify compared to children of other races (Needell et al., 2014; Webster, Shlonsky, Shaw & Brookhart, 2005). Building on the findings of geographically limited studies, this study will be the first of its kind, investigating the reunification of American Indian children utilizing a national sample with enough American Indian children to compare them to children of other better understood racial groups.

Thus, this study contributes to the literature in a number of ways. First, since many of the studies exploring the reunification of American Indian children are geographically limited, a major contribution of this study is that it utilizes a national

4

sample. Second, considering that often reunification studies either exclude American Indian children from the analyses or focus strictly on them without including other race comparisons, a contribution of this study is the use of a sample which allows for the both the inclusion of American Indian children and their comparison to children of other more-studied racial groups. This study aims to: (1) enhance the understanding of American Indian children in the child welfare system through exploring differences in the probability of reunification for American Indian children compared to children of other races; and (2) examine the capabilities and demands that are indicators of family functioning following long-term foster care and their probability to predict reunification.

Guiding Theoretical Framework

This study is grounded in Patterson's (2002a, 2002b) Family Adjustment and Adaptation Response (FAAR) theory because the theory provides a foundation for understanding family adaptation following out-of-home placement. As applied to American Indian families involved in the child welfare system, FAAR theory offers an explanation as to why some children in child welfare remain healthy and do well despite facing exposure to certain risks and adversities, while others do not. The application of a family theory is important, as reunification is conceptualized as a positive family-level outcome (i.e., demonstrating that family is resilient post child maltreatment and out-of-home placement). In this sense, reunification can be viewed as an example of success in resolving the problem of child maltreatment and resuming fulfillment of the nurturance function (Patterson, 2002b).

Patterson (2002b) suggests that families are social systems comprised of two or more members (structure) and the patterns of relationships between them (i.e., functioning). An assumption of FAAR is that families fulfill important functions for their members including nurturance, socialization, and protection (Patterson, 2002b). For example, a high-quality relationship between a parent and child, which is appropriate to the developmental needs of the child, is an example of success in fulfilling the functions of nurturance and socialization (Patterson, 2002b). In contrast, child maltreatment is an example of the failure to accomplish those same functions (Patterson, 2002b). Patterson describes child maltreatment as a time of crisis – a period of disequilibrium and disruption as a result of an unhealthy balance between family resources and demands.

This study investigates the capabilities and demands that influence the probability of reunification for American Indian children. The independent variables included in this study are indicators of the outcome of the process of adaptation. In other words, reunification is the outcome of the adaptation on behalf of the family in response to said crisis. This study did not directly measure family functioning; rather measures the capabilities and demands of families as indicators of family functioning that predict the probability of reunification.

FAAR theory suggests that families use their capabilities to meet demands. Family capabilities are not only about what families have (i.e., resources), but what families do (i.e., coping behaviors). Capabilities are defined as "potentiality the family has available to it for meeting demands" (Patterson, 1988, p. 215). A resource is defined as "a characteristic, trait, competency or means" (Patterson, 1988, p. 216). Whereas,

coping behavior is defined as "a specific effort by which an individual attempts to reduce or manage a demand" (Patterson, 1988, p. 218). As FAAR theory applies to this study, family capabilities include the child being in a foster care placement (as opposed to kinship care or other/group home placement), as well as the absence of family demands. These capabilities are viewed as contributing to increased odds of reunification. Previous research suggests that type of placement impacts reunification (Courtney & Hook, 2012; Shaw & Webster, 2011).

It is not enough to consider family capabilities when studying reunification, as the degree of family demands also influences the probability of reunification. Family demands are stressors and ongoing strains, whereas family capabilities are psychosocial resources and coping patterns equivalent to protective factors (Patterson, 2002b). Demands are defined as "a stimulus or condition that produces or call for change in the family system" (Patterson, 1988, p. 210). Demands produce tension within the family system until some capacity is allocated to meet the demand (Patterson, 1988). A stressor is defined as any "life event that occurs at a discrete point in time and produces change in the family social system" (Patterson, 1988, p. 210). As FAAR theory applies to this study, family demands include child age, child emotional or behavioral problems, low caregiver education, caregiver need or receipt of alcohol or drugs services, greater neighborhood problems, receipt of governmental assistant (which is a proxy for poverty), higher levels of harm and risk, and non-foster care type placements (kinship or other/group home).

Previous research suggests that the following variables influence reunification: child age (Bellamy 2008; Connell et al., 2007; Courtney & Hook, 2012; Shaw & Webster, 2011), child gender (Bellamy 2008; Connell et al., 2007; Courtney & Hook, 2012; Shaw & Webster, 2011), type of maltreatment (Bellamy 2008; Connell et al., 2007; Courtney & Hook, 2012; Shaw & Webster, 2011), caregiver education (Bellamy 2008), caregiver mental health or substance abuse (Bellamy 2008), receipt of governmental assistance or poverty (Bellamy 2008; Connell et al., 2007), neighborhood problems (Bellamy 2008), and type of placement (Courtney & Hook, 2012; Shaw & Webster, 2011). Older children, higher level of risk, higher level of harm, caregiver low education, the presence of caregiver mental illness or substance abuse, receipt of governmental assistance, type of maltreatment, and neighborhood problems are all considered demands. These demands are viewed as contributing to decreased odds of reunification. In accordance with FAAR theory, the absence of a demand is considered a capacity.

In this study, when a pattern of child maltreatment results in a child's removal from their family, this time is considered a period of crisis (Patterson, 1988). A phase of adaptation follows crisis – reunification is evidence of healthy adaptation. During the adaptation phase, the family tries to resume homeostasis by their acquiring additional capabilities, whether that be by obtaining capabilities or reducing the pileup of demands (Patterson, 1988). Family adaptation is defined "as a minimal discrepancy between demands and capabilities" (Patterson, 1988, p. 229). Reunification is healthy adaptation. This study takes into account the demands and capabilities of families at one year of out-of-home placement, balancing on those variables – or in other words controlling for

them, and allowing for the exploration of the effect of race on the probability of reunification.

Literature Review

Despite the disproportionate representation of American Indian children in the child welfare system, there continues to be a dearth of literature on the outcomes of American Indian children and families following child welfare involvement, particularly following long-term foster care. Further, literature that does exist tends to concentrate on the predictors of out-of-home placement, rather than what happens to these children (e.g., reunification) following out-of-home placement. Those few studies that focus on reunification outcomes that include American Indian children are geographically limited, as no studies utilizing a national sample exist to our knowledge. Considering this gap within the literature, this literature review summarizes what little is known about American Indian children and families in the child welfare system. Although reunification is the dependent variable of focus in this study, given the connection between out-of-home placement and reunification, this literature review will begin by describing American Indian cultural considerations, followed by what is known about out-of-home placement for American Indian children, research regarding long-term foster care, and then reunification.

American Indian Cultures

Entire generations of American Indian families have been disconnected from family and tribe as a result of relocation and systematic practices of child removal (Crofoot & Harris, 2012). In 1978, Congress passed the Indian Child Welfare Act

(ICWA), which aimed to keep American Indian children with their families. This act emerged from the alarming rates of American Indian children being removed from their homes by public and private agencies (Atwood, 2008). ICWA requires child welfare workers to connect with American Indian nations when working with American Indian children (Graham, 2008). When American Indian families interact with the child welfare system, important cultural considerations should be taken into account. For example, in American Indian cultures, definitions of "family" and "caregiver(s)" reach beyond that of the "parent" defined in the laws and practices of the child welfare system. Although the cultural contexts of American Indian communities may differ, historic law and traditions suggest that tribes' value continuity and stability in caregiving (Atwood, 2008). Simultaneously, tribal approaches to permanency can be seen in traditions of shared child-rearing and collective responsibility taking for children. Reunification for American Indian children goes beyond family to tribe.

Out-of-Home Placement

Out-of-home placement refers to when children in the child welfare system are placed outside their home into foster care, kinship care, group home or residential setting (Child Welfare Information Gateway, 2013c). Previous research utilizing nationally representative child welfare data (NSCAW I) suggests that American Indian children with a caregiver who had alcohol abuse problems (Carter, 2009), drug abuse problems and mental health problems (Carter, 2010) were more likely to experience out-of-home placement. These studies suggest the significance of caregiver characteristics in the prediction of out-of-home placement for American Indian children. Although previous

literature has explored the predictors of placement into out of home-care for American

Indian children (Carter, 2010, 2009) researchers have yet to explore what happens to

these children (e.g., reunification) following out-of-home placement using national data.

Long-Term Foster Care

Although out-of-home placement in foster care is intended to serve as a temporary

living arrangement for a child in need, many children continue to experience lengthy

stays in foster care (Lowry, 2004). The following summary refers to findings for the

general foster care population, rather than findings specifically for American Indian

children. The median amount of time spent in foster care in 2012 was 13.4 months. In

2012, 54% of children who exited foster care had spent 12 months or more in the foster

care system (Child Welfare Information Gateway, 2013b). Long-term foster care children

represent a large percentage of those being served by foster care at any given time

(Bellamy, 2008). Longer stays in foster care have particular implications for children in

child welfare, as such children may display greater mental health problems and may be

less likely to reunify with their families of origin, which continues to warrant specialized

attention. Exits from foster care have been linked to behavioral problems (Fraser, Walton,

Lewis, Pecora, & Walton, 1996; Landsverk, Davis, Ganger, Newton & Johnson, 1996),

which have, in turn, been linked to reduced likelihood of reunification (Fraser et al.,

1996; Landsverk et al., 1996; Smithgall et al., 2005).

Reunification

Reunification refers to the process of returning children in out-of-home placement

to their families of origin (Child Welfare Information Gateway, 2011) and reinstating

custody to parent(s). The family that a child is reunified with is most likely the parent(s) or family they were removed from, which in some instances may be a biological parent or adoptive parent, whoever holds custody of the child. Reunification is both the preferred permanency plan goal and the most common outcome in the child welfare system (Child Welfare Information Gateway, 2011, 2012). Reunification is rooted in the importance of stable parent-child relationships in contributing to children's health (Maluccio, Abramczyk, & Thomlison, 1996). Despite strong policy support for reunification, little is known about the probability of reunification for American Indian children in the child welfare system.

In a study of adult adoptees, which is different than the sample focus of this study, Landers, Danes, and White Hawk (2015) explored reunification processes and outcomes for American Indians adults separated from their families of origin by adoption and/or foster care. Findings from Landers et al. (2015) suggest that social identity (i.e., who am I in relation to others?) plays an important role in the experience of reunification for American Indians. Social identity "is composed of shared similarities with certain members of social categories" (Landers et al., 2015, p. 20). American Indians who experienced removal have both a family of origin to return to, but also potentially a tribe and ancestral land. Connection with extended family and tribe are important components to bettering the reunification experience from the adoptee's perspective.

American Indian children have, for the most part, been excluded from reunification research. Studies utilizing national data to explore the reunification of American Indian children have not been conducted to date. However, studies utilizing

state and/or countywide data to examine the effect of race on the reunification have conveyed interesting findings. For instance, Webster, Shlonsky, Shaw, and Brookhart (2005) found that American Indian children were less likely than Caucasian children to experience reunification. Similarly, trends observed in bivariate analyses of exit status in the University of California at Berkeley California Child Welfare Indicators Project suggest that American Indian children are less likely to reunify (Needell et al., 2014). To our knowledge these authors have not offered explanations about why these findings might exist.

Hypotheses

Grounded in the research reviewed above and FAAR theory, the following hypotheses were developed:

H1. After matching American Indian and Caucasian children who experienced long-term foster care on indicators of family demands and capabilities, the effect of race (being American Indian) will be statistically significant (in a positive direction) on reunification at follow-up.

H2. After matching American Indian and African American children who experienced long-term foster care on indicators of family demands and capabilities, the effect of race (being American Indian) will be statistically significant (in a positive direction) on reunification at follow-up.

This study aimed to establish matched comparisons between American Indian, African American and Caucasian children. These two comparison groups are being utilized for a number of reasons. First, both ethnic groups are easily identifiable and

distinct cultural groups. Second, Caucasian children are considered of the dominant culture in the United States and previous studies suggest positive child-welfare related outcomes for this group. Lastly, African American children are already evidenced as a disadvantaged group studied in child welfare, as previous research has consistently supported negative outcomes for African American children, as well as their disproportionate representation within the child welfare system.

Methods

Data Source

The study was executed using data from the National Survey of Child and Adolescent Well-being (NSCAW I) (Dowd et al., 2002), the first nationally representative study of the U.S. child welfare system. In the NSCAW I, families were recruited via child protection agencies. Following receipt of an introductory letter by mail, field representatives contacted caregivers to participate. Wave 1 (baseline) child and family interviews were initiated following the close of a child welfare investigation. Baseline, 18-month, and 36-month follow-up data were used in this study.

Sampling Procedures

The NSCAW I long-term foster care sample provided the data source for this study. The NSCAW I sample of children was selected using a two-stage combined stratification and cluster design. The U.S. was divided into nine strata as the majority of children involved in the child welfare system reside in eight states. Those eight states constituted the first eight strata, whereas the ninth stratum was composed of the remaining 42 states and the District of Columbia. In each stratum, individual areas are

served by a single Child Protective Service (CPS) agency constructing the primary sampling units (PSUs). The sampling frame (PSUs) included all service areas with 60 or more cases per year (smaller service areas were excluded from the sampling frame and only comprised 3% of all cases nationally). Through random selection, 100 PSUs were identified from each stratum via a probability-proportionate-to-size procedure. Of those selected, eight were deemed ineligible as such states required first contact to target the child's caregiver was made by a CPS worker (rather than a NSCAW field representative).

The long-term foster care (LTFC) sample originally consisted of 727 children. In order to meet eligibility requirements, children in the long-term foster care sample had to: (1) be in out-of-home care for approximately 12 months at the time of sampling, (2) experience out-of-home care following an investigation of child maltreatment or period of in-home services, and (3) experience out-of-home care at the same time that the sampling frame was produced. Children eligible to participate were randomly sampled among those in care between July 1998 and February 1999, and the sample selection was limited to one child per household. Children's length of time in out-of-home care ranged from 8 to 18 months. The final sample was weighted to account for the probability of the PSU and the child's selection. Data were collected across three waves including baseline, 18-month, and 36-month follow-up. The LTFC sample had enough American Indian children ($n = 44$) to conduct the proposed analyses.

From the total LTFC sample ($N = 727$), children identified as Asian/Hawaiian/Pacific Islander, other race, or whose race was unknown, missing, or refused to be provided were dropped from the analyses. Next, children under the age of

two years old were dropped as a result of the lack of an adequate measure for behavioral problems for children that young. Children who are reunified at baseline and/or for whom the outcome variable of reunification was missing at either 18 or 36-month follow-up were also dropped.

All variables had fewer than 18% missing data. Cases with missing data differed across variables. Missing data were addressed through multiple imputation, as it generally outperforms other approaches (i.e., listwise deletion, mean substitution) in simulation studies (Croy & Novins, 2005). Participants with complete data on all variables were compared with participants who were missing data on any variable using t-tests and chi-squared tests. No significant differences were found between participants with complete data and those with missing data on any variable with regard to child age, child gender, child race, or parent education. The final sample size was 456 children (including American Indian ($n = 44$), African American ($n = 227$), and Caucasian ($n = 185$) children.

Sample Description

The unweighted characteristics at baseline are depicted in Table 1.1 for the total sample, as well as each of the subgroups (i.e., American Indians, African Americans, Caucasians). The mean age of children in the sample was 7.98 years old ($SD = 4.17$) and 51.10% were male. The majority (60.7%) of the sample were placed in foster care as opposed to kinship care (28.7%) or another form of care (group home care or otherwise) (10.5%). The majority of children experienced neglect (51.5%) as the most severe type of maltreatment. Less than half (43.6%) of these children had caregivers who needed and/or

received alcohol or drug treatment and even less (11.4%) had caregivers with less than a high school education. More than one third of these children (39.7%) came from families who received governmental support (e.g., WIC, welfare, foodstamps).

Measures

A number of derived and revised variables have already been established and are available in the NSCAW I data set. These derived and revised variables were developed by NSCAW compilers and were already established in the dataset utilized in this study; from here on out referred to as the "derived and revised variables". Many of these variables were created based on multiple informants and/or multiple waves of data. Additional information about how these variables were constructed can be found in the NSCAW Codebooks (National Data Archive on Child Abuse and Neglect, 2016).

Reunification. The reunification outcome variable was derived from child, caregiver, and caseworker reports. Reunification was operationalized as having returned home to reside with the child's family of origin. Reunification was a dichotomous variable with two levels (0 = *Not reunified*, 1 = *Reunified*), reflecting if the child had reunified at either the 18-month and/or 36-month follow-up. The majority of children in the sample were reunified by 18 and/or 36-month follow-up (62.3%).

Child race. Child race was obtained from the derived and revised variables and reflected the rarest race of the child. When more than race was reported, the rarest race among the five categories was assigned based on the 1990 United States Census. Respondents were asked about the race of the child. The response options included American Indian, Asian/Hawaiian/Pacific Islander, Black, White, or Other. Rarest race

order (from rarest to most common) was as follows: American Indian, Asian/Hawaiian/Pacific Islander, Black, White, Other. If a child was identified as American Indian at any time point (baseline, 18-month, 36-month follow-up) the child was coded as American Indian. Race categories were dichotomized (0, 1) to create groups of American Indians ($n = 44$; 9.6%), African Americans ($n = 227$; 49.8%), and Caucasians ($n = 185$; 40.6%).

Conceptually, race refers to a peoples' shared genetic heritage. In contrast, ethnicity refers to common beliefs or values, and practices that are derived from peoples' nationality their common ancestry, or even shared immigration experiences (Hill, Murry & Anderson, 2005). Ethnicity is more than who a person is; it encompasses how a person feels during and about a particular circumstance (Stayman & Deshpande, 1989). Although ethnicity and culture are important concepts to consider, this study concentrates on race because of its availability in the NSCAW dataset.

Child age. Child age was obtained from the derived and revised variables and reflected the child's age in years. Children's mean age was 7.98 years old ($SD = 4.17$, $Min = 2$, $Max = 15$).

Child gender. Child gender was also obtained from the derived and revised variables reflecting if the child was male (0) or female (1). Fifty-one percent were male ($n = 233$).

Type of maltreatment. The most severe type of maltreatment allegedly experienced by the child was measured at baseline through a caseworkers' report, which utilized a modified version of the Maltreatment Classification Scale (Manly, Cicchetti, &

18

Barnett, 1994). Response options included: (1) physical maltreatment, (2) sexual maltreatment, (3) emotional maltreatment, (4) physical neglect, (5) neglect – no supervision, (6) abandonment, (7) moral/legal maltreatment, (8) educational maltreatment, (9) exploitation, and (10) other maltreatment. Items were dichotomized to represent four categories of maltreatment, including: physical maltreatment ($0 = No$, $1 = Yes$) (13.2%), sexual maltreatment ($0 = No$, $1 = Yes$) (7.5%), neglect ($0 = No$, $1 = Yes$) (51.5%), and other maltreatment ($0 = No$, $1 = Yes$) (27.4%). Physical neglect and no supervision were collapsed into neglect. Emotional maltreatment, abandonment, moral/legal maltreatment, educational maltreatment, exploitation, and other maltreatment were collapsed into other maltreatment. These children most frequently experienced neglect as the most severe type of maltreatment (51.5%).

Level of harm. Level of harm was obtained from the derived and revised variables reflecting the level of harm to the child. Respondents were instructed as follows: "For the next set of questions, please do not be concerned with whether or not the report was substantiated when offering your responses. Regardless of the outcome of the investigation, how would you describe the level of harm to the child? Would you say… none, mild, moderate or severe?" The item was coded to the following scale ($0 = none$, $1 = mild$, $2 = moderate$, $3 = severe$). Children's mean level of harm was 2.12 ($SD = 0.94$, $Min = 0$, $Max = 3$).

Level of risk. Level of risk was obtained from the derived and revised variables reflecting the level of severity of risk to the child. Respondents were instructed as follows: "Regardless of the outcome of the investigation, how would you describe the

level of severity of risk? Would you say… none, mild, moderate or severe?" The item

was coded to the following scale (0 = *none*, 1 = *mild*, 2 = *moderate*, 3 = *severe*).

Children's mean level of risk was 2.17 (*SD* = 1.0, *Min* = 0, *Max* = 3).

Caregiver education. Caregiver education was obtained from the derived and

revised variables based on the current caregivers' report of highest education. The item

was coded as "less than high school", "high school", and "high school plus." Caregiver

education was dichotomized to represent low educational attainment, specifically if the

caregiver held a high school diploma or equivalent (0 = *No*, 1 = *Yes*). Approximately one-

tenth of caregivers had less than a high school education (11.4%).

Caregiver substance abuse. Caregiver need for substance abuse services was

derived from caseworker report. The dichotomous item was coded to the following scale

(0 = *No*, 1 = *Yes*). Less than half of the caregivers of these children had substance abuse

problems (43.6%).

Receipt of governmental support. Similar to Bellamy (2008), government

assistance was constructed based on the current caregivers' report of receiving Women

Infants and Children (WIC), Temporary Assistance for Needy Families (TANF), or food

stamps. Government assistance was considered a proxy measure of poverty. A

dichotomous item was created to represent if the caregiver received at least one form of

assistance (WIC, TANF, and/or food stamps) (0 = *No*, 1 = *Yes*). Fewer than half of

caregivers received governmental assistance (39.7%).

Neighborhood problems. Neighborhood problems were measured based on the

caregivers' report of the presence of concerning community activities, including: assaults

and muggings, delinquent or gang activity, open drug use and/or dealing, unsupervised children, and groups of teens hanging out. Each of these neighborhood variables was dichotomized (0 = *No*, 1= *Yes*) to reflect the presence or absence of the neighborhood problems. Fewer caregivers reported assaults/muggings (10.7%) than delinquent or drug gangs (17.8%), open drug use or dealing (17.8%), unsupervised children (23.9%) or groups of teens hanging out (17.1%). A composite score was also created to represent the sum total of neighborhood problems reported by the caregiver ranging from 0 to 5, with 0 representing no neighborhood and 5 representing the presence of all 5 neighborhood problems. Conceptually, this variable represents risks in the community context in which the child and their family resided. The mean of neighborhood problems was 0.87 (*SD* = 1.35, *Min* = 0, *Max* = 5).

Placement type. The child's placement type was used to construct three dichotomous variables: kinship care, foster care, and group home/other care. Kinship care was dichotomized to represent whether the child was in a kinship placement (0 = *No*, 1 = *Yes*). Foster care was dichotomized to represent whether the child was in a foster care placement (0 = *No*, 1 = *Yes*). Lastly, group home/other care was dichotomized to represent whether the child was in a group home, residential or other placement (0 = *No*, 1 = *Yes*). Arguably children in this category of placement experience poor developmental outcomes when compared to peers in family environments and may have higher needs upon entry into placement (Harden, 2004). The majority of children were in foster care placement (60.7%) as opposed to kinship (28.7%) or group home care (10.5%).

Analytical Procedures

Analyses were performed using Stata Statistical Software: Release 13 (StataCorp, 2013). The sampling and weighting strategy of the NSCAW was implemented through Stata's survey commands. Statistical weights are required in the analysis of NSCAW data. These weights have been adjusted in order to obtain unbiased estimates of population parameters and account for a complex sample design (NSCAW Research Group, 2010). Propensity score matching were used to explore the role of risk and protective factors and race on reunification from baseline to 18-month and 36-month follow-up. In this study, our treatment of interest is race (being American Indian).

A propensity score model is presented to estimate the effect of race on the probability of reunification. Propensity score matching is a technique used to estimate the effect of a treatment. Comparison groups are matched on important covariates, which are measured before the treatment (Bellamy, 2008; Bellamy, Gopalan, & Traube, 2010). In this study, the treatment of interest is race. In the first step, baseline covariates were used to create balanced comparison groups of American Indian, African American, and Caucasian children. Stata's psmatch2 command was used to establish these balanced groups. When acceptable balance was achieved on all covariates, differences between groups can arguably be attributed to the treatment (i.e., race) (Bellamy, Gopalan, & Traube, 2010). Acceptable balance was considered when differences on variables in the model were minimized to the extent possible and when ideally no statistically significant differences remained. However, it is not always possible to have no statistically significant differences, particularly with a larger sample. When statistically significant differences remained, such differences were small enough as to be unlikely to contribute

to the outcome. Covariates included in this analysis were baseline child, caregiver/family, and child welfare case characteristics.

Multiple logistic regression was then used to explore the role of race, as well as demands and capabilities on the probability of reunification at 18 and/or 36-month follow-up. The plan for statistical power was .80 and our sample size of 456 was large enough to detect a medium size effect ($p = .05$) (Cohen, 1992). The same independent variables were entered into the propensity score model and the regression equation. The propensity score model only estimates the effect of race on reunification after balancing on family demands and capabilities (i.e., holding those variables constant), whereas multiple logistic regression takes into account the effect family demands and capabilities in addition to race. These two analyses together provide a more complete picture of the effect of race, as well as the effects of family demands and capabilities on reunification.

Results

Approximately 62.3% of children in the total sample reunified by 18-month or 36-month follow-up. When broken down by racial group, 52.3% of American Indian children, 62.1% of African American, and 64.9% of Caucasian children were reunified by 18-month or 36-month follow-up. Results of the propensity score matching models are as follows. Model 1 included American Indian and Caucasian children. Reasonable balance was achieved for the propensity score matching model, as there were no statistically significant differences at baseline between groups on any of the covariates except for children's age (see Table 1.2). American Indian children were more likely to be older than Caucasian children. Model 2 included American Indian and African American

children. Reasonable balance was achieved for the propensity score matching Model 2, as there were no statistically significant differences at baseline between groups (see Table 1.3). Table 1.4 presents the estimated effect of race on reunification at 18 and/or 36-month follow-up for both Model 1 (American Indian to Caucasian comparison) and Model 2 (American Indian to African American comparison). It is important to note that the effect of race was not significant in either model. Table 1.5 presents the weighted logistic regression of reunification at 18 and/or 36-month follow-up for Model 1 (American Indian to Caucasian comparison). Table 1.6 presents the weighted logistic regression of reunification at 18 and/or 36-month follow-up for Model 2 (American Indian to African American comparison). Race had no statistically significant impact on reunification in either model.

Discussion

Although American Indian children are disproportionately represented in child welfare, little is known about child welfare-related outcomes (e.g., reunification) for these children. The purpose of this study was to: (1) enhance the understanding of American Indian children in the child welfare system through exploring differences in the probability of reunification for American Indian children compared to children of other races; and (2) examine the capabilities and demands that are indicators of family functioning following long-term foster care and their probability to predict reunification. Hypothesis one (i.e., the effect of race – comparing American Indian and Caucasian children – being statistically significant on the outcome of reunification) was not supported. Hypothesis two (i.e., the effect of race – comparing American Indian and

24

African American children – being statistically significant on the outcome of reunification) was also not supported. In essence, across both models after balancing on important family demands and capabilities, race was not found to be significant in predicting reunification. Race in and of itself may not matter statistically, but American Indian children are exposed to more of the risk factors that lead to decreased odds of reunification (as is evidenced in the descriptive statistics in this study).

Descriptive differences between American Indian, Caucasian, and African American children are notable (see Table 1.1). American Indian children are exposed to greater total neighborhood problems and specifically exposure to assaults/muggings, delinquent or drug gangs, and unsupervised children in the neighborhood. American Indian children are of older age and are also exposed to greater levels of risk. According to the results of the regression analyses, differences in the probability of reunification are better explained by a combination of developmental, contextual, and behavioral variables such as child age, behavioral problems, and placement type rather than race. The three-group comparison included in this study suggests that although American Indian children are descriptively less likely to reunify, such differences are not attributable to race alone. Rather, reunification differences are better accounted for by family demands and capabilities.

As noted earlier, race is a term that refers to a peoples' shared genetic heritage. Conceptually, race is different from concepts such as ethnicity and culture. Ethnicity refers to common beliefs or values, and practices that are derived from peoples' nationality their common ancestry, or even shared immigration experiences (Hill, Murry

& Anderson, 2005). This study used race as the primary construct of interest because of its availability in the NSCAW I dataset, rather than ethnicity or culture. Race is in and of itself a limited construct, one that does not allow for the exploration of culture. Culture is a critical component to consider when exploring differences for American Indian children because in American Indian cultures tribe is regarded as family. These other factors (i.e., ethnicity and culture), as well as discrimination experienced in the child welfare system could, in theory, contribute to differences in reunification. Unfortunately, measures of these constructs were not included in the NSCAW I data, but should be considered for inclusion in future research.

Although the probability of reunification is important for all children in the child welfare system, it is of great importance for American Indian children since reunification with family is a critical component to cultural preservation. Reunification is an essential component to ensuring the survival of American Indian cultures, which distinguishes the importance for American Indian children to children of other races (e.g., African American or Caucasian). Previous research on American Indians adult adoptees echoes the importance of reunification (Landers et. al., 2015) in cultural survival, as is captured in the "generation after generation we are coming home" (White Hawk, 2014, p. 1).

This study offers a number of contributions. First, this study expanded upon previous geographically limited research by utilizing a nationally representative child welfare sample to investigate the effect of race on the probability of reunification. Historically, many reunification studies have chosen to either exclude American Indian children or focus solely on them in analysis, whereas this study includes American Indian

26

children and allows for a comparison to other more-studied racial groups. Third, this study explores the effect of race, as well as family demands and capabilities in predicting the probability of reunification.

This study expands upon previous atheoretical reunification research through its grounding in Patterson's (2002a, 2002b) Family Adjustment and Adaptation Response (FAAR) theory. FAAR theory provides a foundation for understanding American Indian children and their families in the child welfare system. In this study, reunification is viewed as a positive family-level outcome demonstrating that a family is resilient; reunification is success in resolving the problem of child maltreatment and parent(s) fulfilling nurturance functions (Patterson, 2002b). FAAR theory suggests that families use their capabilities to meet demands and that child maltreatment occurs as a result of an unhealthy balance between those demands and capabilities. Whereas adaptation is conceptualized as when there is minimal discrepancy between a family's demands and their capabilities (Patterson, 1988). This study provides support for FAAR theory by testing an analytical model that is consistent with Patterson's theoretical model. The findings of this study suggest that family demands and capabilities need to be considered when accounting for differences in the probability of American Indian children's reunification. Focusing solely on race does not reveal the complex picture of the factors contributing to American Indian children's decreased probability for reunification.

Conclusions

Although this study offered various strengths by focusing specifically on American Indian children in long-term foster care, it is not without its limitations. This

study is limited by the confines of secondary data in that it only explores race, as opposed to ethnicity and culture.

Conclusions drawn from these findings should be cautioned for a number of reasons. First, the small sample size of American Indian children (n = 44) may not represent all American Indian children in child welfare. This is one of the first studies exploring the reunification of American Indian children in the National Survey of Child and Adolescent Well-being; no claims to generalizability can be made. Findings from this study may be specific to this particular sample or they may not represent the outcomes of American Indian children in tribal child welfare. In future child welfare studies, specifically exploring outcomes following long-term foster care children, targeted sampling of American Indian children would be helpful. Future studies might also explore the importance of sibling level data (e.g., placement with a sibling, number of children in the home, etc.) in predicting the probability of reunification, as the lack of such variables is another limitation of this study.

In addition, another limitation is that information was not provided regarding the child's tribal affiliation or enrollment status and this study does not take into account whether these children were urban, rural, or residing on a reservation. Third, it is also unclear to what extent these children self-identify as American Indian. It might be that children residing on reservations or those who to a greater extent identify as American Indian may differ from children who reside off reservation and/or may identify as a different ethnicity (e.g., Caucasian, African American, Biracial, or Other).

Internalizing and externalizing behavior problems of American Indian

children in the child welfare system

Children in the child welfare system are a vulnerable population through their exposure to child maltreatment and its associated risks (e.g., poverty, parental substance abuse, out-of-home placement). One of such vulnerabilities relates to mental health problems. Mental health is a broad term that encompasses an individual's – in this case child's – emotional, social, and psychological well-being (U.S. Department of Health and Human Services, 2015). An important component of mental health is behavioral problems. Behavioral problems are defined as a "symptomatic expression of emotional or interpersonal maladjustment" (Merriam-Webster, 2015, p. 1). Behavioral problems occur in two distinct forms – externalizing and internalizing behavior problems. While externalizing behavior problems are "marked by defiance, impulsivity, disruptiveness, aggression, antisocial features, and overactivity" (Hinshaw, 1992, p. 127; Achenbach & Edelbrocj, 1978), internalizing behavior problems are marked by "withdrawal, dysphoria, and anxiety" (Hinshaw, 1992, p. 127). Behavior problems are the focus of this study.

Previous research suggests that children in foster care display high rates of behavioral problems or clinically significant behavior problems (Halfon, Mendonca, & Berkowitz, 1995; Hochstadt, Jaudes, Zimo, & Schachter, 1987; Leslie, Hurlburt, Landsverk, Barth, & Slymen, 2004). For instance, children in foster care have higher rates of mental health problems and are more likely to display clinically significant behavior problems than children in community samples (Clausen, Landsverk, Ganger, Chadwick, & Litrownik, 1998). The majority of research on behavioral problems has

focused children in out-of-home placement, specifically foster care, rather than children involved in the child welfare system who may not have experienced out-of-home placement. However, some researchers have suggested that elevated behavioral needs are found across varying levels of child welfare involvement (investigated, closed child welfare case, child in out-of-home placement) (Stahmer et al., 2005). As such, children involved in the child welfare system display elevated or clinically significant behavioral problems (Burns et al., 2004; Farmer et al., 2001; Kortenkamp & Ehrle, 2002; McCrae, 2008; Raghavan, 2010).

Although children of certain racial minorities in foster care have greater unmet mental health needs (Garland, Landsverk, & Lau, 2003), few studies have explored the impact of race or ethnicity on behavioral outcomes of children in child welfare. One such study by Jewell, Brown, Smith and Thompson (2010) found that African American youth in transracial out-of-home placements exhibited significantly more externalizing behavior problems than Caucasian transracially placed youth. Transracially placed African American youth also exhibited significantly more externalizing behavior than Caucasian and African American youth in racially congruent placements. However, these authors found no differences between these same groups with regard to internalizing behavior problems (Jewell, Brown, Smith, & Thompson, 2010). Although this study focuses on congruence of caregiver in ethnicity, it begins to highlight the potential impact of ethnicity on children's behavioral problems. Overall, less is known about the behavioral needs of children of certain racial minority statuses (e.g., American Indian children) in

the child welfare system. Although few studies exist that suggest elevated behavioral problems for children in child welfare (Burns et al., 2004; Farmer et al., 2001; Kortenkamp & Ehrle, 2002; McCrae, 2008; Raghavan, 2010), such studies have not included American Indian children. American Indian children are underrepresented in child welfare literature, despite being overrepresented in the child welfare system. Thus, this study explores the behavior problems of American Indian children in comparison to Caucasian and African American children after matching these racial groups on a number of important characteristics.

This study contributes to the literature in a number of ways. First, although most research has focused on foster care children, the sample included in this study is of children who experienced a formal child protective services (CPS) investigation/assessment following report of child abuse or neglect. Some, but not all, of the children in this study experienced out-of-home placement. Second, this study utilized a sample that allowed for the both the inclusion of American Indian children and their comparison to children of other more-studied racial groups. This study aims to: (1) enhance the understanding of American Indian children in the child welfare system through exploring differences in the probability of displaying clinically significant internalizing and externalizing behavior problems for American Indian children compared to children of other races; and (2) examine the capabilities and demands that are indicators of family functioning following child welfare involvement and their probability to predict displaying clinically significant internalizing and externalizing behavior problems.

Guiding Theoretical Framework

This study is grounded in Patterson's (2002a, 2002b) Family Adjustment and Adaptation Response (FAAR) theory, which provides a foundation for understanding family adaptation following child welfare involvement. As applied to American Indian families involved in the child welfare system, FAAR theory offers an explanation as to why some children in child welfare remain healthy and do not display clinically significant behavior problems despite facing exposure to certain risks and adversities, while other children display clinically significant behavior problems. The application of FAAR theory is important, as the absence of displaying clinically significant child behavior problems is conceptualized as a positive family-level outcome (i.e., demonstrating that family is resilient post child welfare involvement). In this sense, the absence of behavior problems is viewed as one example of success in resolving the problem of child welfare involvement (Patterson, 2002b).

Patterson (2002b) suggests that families are social systems comprised of two or more members (structure) and the patterns of relationships between them (i.e., functioning). As a social system, families are comprised of two or more members (that is structure). However, families are also comprised of the relationship patterns that exist between members (that is functioning). An assumption of FAAR theory is that families fulfill important functions for their members; for example parents fulfill functions of nurturance, socialization, and protection for their children (Patterson, 2002b). When a high-quality parent-child relationship exists, a parent is successful in fulfilling functions of nurturance and socialization for the child (Patterson, 2002b). Whereas, child

32

maltreatment warranting involvement from the child welfare system can be viewed as an

example of the caregiver's failure to fulfill functions of nurturance, socialization, and

protection (Patterson, 2002b).

This study investigates the capabilities and demands that influence the probability

of displaying clinically significant behavior problems for American Indian children. The

independent variables included in this study are indicators of the outcome of the process

of adaptation. The absence of displaying clinically significant behavior problems is the

outcome of the adaptation on behalf of the family in response to said crisis. This study

did not directly measure family functioning; rather the capabilities and demands of

families that are indicators of family functioning that predict the probability of displaying

clinically significant behavior problems.

FAAR theory suggests that families use their capabilities (i.e., resources and

coping behaviors) to meet demands. Family capabilities include what families have (i.e.,

resources) and do (i.e., coping behaviors). The capabilities included in this study are:

having a caregiver with more than a high school education, fewer neighborhood

problems, lower levels of risk, lower levels of harm, and children who remain in the

home as opposed to out-of-home placement. These capabilities are viewed as

contributing to decreased odds of displaying clinically significant behavior problems.

Family demands also influence the probability of displaying clinically significant

behavior problems. Demands are defined as stressors and strains, which produce tension

in the family system until a capacity is allocated to them (Patterson, 1988). The presence

of demands contributes to increased odds of displaying clinically significant behavior

33

problems. These demands include: having a caregiver with less than a high school education, higher neighborhood problems, higher levels of risk, higher levels of harm, and out-of-home placement.

Child welfare involvement is a period of disequilibrium and disruption (crisis) that results from an unhealthy balance between family capabilities and demands. Families in child welfare try to resume homeostasis by obtaining additional capabilities or by reducing their demands (Patterson, 1988). Minimal discrepancy between demands and capabilities is considered adaptation (Patterson, 1988). The absence of displaying clinically significant behavior problems is healthy adaptation. This study takes into account the demands and capabilities of families following a formal CPS investigation/assessment by matching on those variables (in other words controlling for them) and then exploring exploration of the effect of race on the probability of displaying clinically significant behavior problems.

Literature Review

Although American Indian children are overrepresented in child welfare, the behavior problems of American Indian children have not been explored following child welfare involvement. Most research that focuses on children's behavioral problems tends to utilize a foster care sample, rather than focusing on children with varying levels of child welfare involvement. Current literature concentrating on behavioral problems of children in child welfare has not included American Indian children. And, while the behavioral problems of children of other racial groups are known (e.g., Caucasian, African American), no studies have explored the behavioral problems of American Indian

34

children following child welfare involvement. This literature review will summarize

research on the behavioral problems of foster care children, then summarize research on

the behavioral problems of children in the child welfare system, and lastly describe

research about American Indian children in child welfare and their unique cultural

considerations.

Behavioral Problems of Children in Foster Care

As stated earlier, behavioral problems are expressions of emotional

maladjustment (Merriam-Webster, 2015), which include externalizing and internalizing

behavior problems. Internalizing behavior problems are marked by "withdrawal,

dysphoria, and anxiety" (Hinshaw, 1992, p. 127), whereas externalizing behavior

problems are marked by "defiance, impulsivity, disruptiveness, aggression, antisocial

features, and overactivity" (Hinshaw, 1992, p. 127). The majority of previous literature

has focused on displaying clinically significant behavioral problems without breaking

down behavioral problems into internalizing and externalizing domains, therefore, in

literature summarized below refers to behavioral problems as a whole, rather than

internalizing or externalizing behavior problems individually.

The majority of extant research focuses on the behavioral problems of children in

foster care. The foster care population is vulnerable (Bruskas, 2008). Children entering

foster care display high behavioral problems (Hochstadt, Jaudes, Zimo, & Schachter,

1987), while children in foster care also display high rates of behavioral problems

(Halfon, Mendonca, & Berkowitz, 1995). When compared to children in a community

sample, children in foster care are more likely to display clinically significant behavior

problems (Clausen, Landsverk, Ganger, Chadwick, & Litrownik, 1998). Furthermore, children display clinically significant behavioral problems across various levels of state custody including foster care, kinship, and group-homes (Heflinger, Simpkins, & Combs-Orme (2000).

Behavioral Problems of Children in Child Welfare

Children referred to the child welfare system have high mental health needs across various levels of child welfare involvement (Stahmer et al., 2005). In particular, children involved in child welfare display elevated or clinically significant behavioral problems (Burns et al., 2004; Kortenkamp & Ehrle, 2002; McCrae, 2008; Raghavan, 2010). Less is known about the behavioral problems of children of certain racial minority statuses in child welfare (e.g., American Indian children). To our knowledge, no studies exploring internalizing and externalizing behavior problems of American Indian children involved in the child welfare system have been conducted. This study will be the first of its kind to examine the effect of race on the behavior problems of children in child welfare.

American Indian Children in Child Welfare and Cultural Considerations

American Indian children are disproportionately represented in the child welfare system. However, there is a dearth of literature on the behavioral problems of American Indian children following child welfare involvement. The unique cultural context of American Indian children suggests their behavioral problems would differ from children of other races. First, the well-being of American Indian children trails that of other racial groups (National Indian Child Welfare Association, 2014b). In comparison to same-age

36

peers, American Indian children experience higher rates of anxiety, depression, and

substance abuse (Libby et al., 2007). Second, there are cultural differences in the report

of distressing symptoms and use of mental health services by American Indians. Distrust

of the dominant health care system is prominent among American Indians and is only

exacerbated by absence of words such as depression and anxiety within many American

Indian languages (National Indian Child Welfare Association, 2014b). Third, although all

families need access to services that meet their needs, the behavior problems of American

Indian children may differ based on their indigenous conceptualization of health, which is

much more holistic than the mainstream child welfare system's conceptualization. Lastly,

American Indian children, particularly those in out-of-home placement, may be more

likely to display behavioral problems as an expression of being separated from culture

and tribe.

What little has been explored regarding American Indian parents in the child

welfare system supports that they differ from others of different races in their use of

services. For instance, American Indian parents with children involved in the child

welfare system have greater mental health and substance abuse needs, but are less likely

to receive mental health services (Libby et al., 2007). Some have suggested greater unmet

mental health needs among children of certain racial and ethnic minorities in child

welfare (Garland, Landsverk, & Lau, 2003). And, although mental health service use

disparities have been found for African American and Latino children in comparison to

Caucasian children in foster care (Garland et al., 2000), to our knowledge no studies have

explored mental health service use or behavioral problems for American Indian children in foster care.

Hypotheses

Grounded in FAAR theory and the aforementioned research, the following hypotheses were developed:

H1. After matching American Indian and Caucasian children in the child welfare system on indicators of family demands and capabilities, the effect of race (being American Indian) on displaying clinically significant internalizing and externalizing behavior problems will be statistically significant (in a positive direction) at 18 and 36-month follow-up.

H2. After matching American Indian and African American children in the child welfare system on indicators of family demands and capabilities, the effect of race (being American Indian) on displaying clinically significant internalizing and externalizing behavior problems will be statistically significant at (in a positive direction) 18 and 36-month follow-up.

This study aimed to establish matched comparisons between American Indian, African American and Caucasian children in the child welfare system. These two racial comparison groups (Caucasian, African American) were utilized for a number of reasons. Both are easily identifiable and distinct groups. In addition, Caucasian race is considered the dominant culture in the United States. And, African American children have been evidenced as experiencing disadvantaged outcomes in child welfare and are also considered a disproportionately represented group in child welfare.

38

Methods

Data Source

The study was executed using data from the Child Protective Services (CPS) sample from the National Survey of Child and Adolescent Well-being (NSCAW I), which was the first nationally representative study of the United States child welfare system (Dowd et al., 2002). In NSCAW I, families were recruited via child protection agencies as follows: Families received an introductory letter by mail and then caregivers were contacted by field representatives inviting them to participate. The baseline (wave 1) interviews with children and their families were initiated following the close of a child welfare investigation. The sample includes children who remained in the home after their case was closed following investigation, children who remained in the home and had an open case, as well as those who were removed from their homes because of the investigation. Baseline, 18-month, and 36-month follow-up data were used in this study.

Sampling Procedures

The NSCAW sample of children was selected using a two-stage combined stratification and cluster design. The U.S. was divided into nine strata as the majority of children involved in the child welfare system reside in eight states. Those eight states constituted the first eight strata, whereas the ninth stratum was composed of the remaining 42 states and the District of Columbia. In each stratum, individual areas are served by a single Child Protective Service (CPS) agency constructing the primary sampling units (PSUs). The sampling frame (PSUs) included all service areas with 60 or more cases per year (smaller service areas were excluded from the sampling frame and

only comprised 3% of all cases nationally). Through random selection, 100 PSUs were identified from each stratum via a probability-proportionate-to-size procedure. Of those selected, eight were deemed ineligible as such states required first contact to target the child's caregiver was made by a CPS worker (rather than a NSCAW field representative).

The child protective services (CPS) sample originally consisted of 5,501 children who experienced a formal CPS investigation/assessment following report of child abuse or neglect. All children were considered eligible for sampling whether the abuse or neglect was substantiated (Dowd et al., 2002). Children eligible to participate were randomly sampled among those in care between July 1998 and February 1999, and the sample selection was limited to one child per household. The final sample was weighted to account for the probability of the PSU and the child's selection. Data was collected across three waves including baseline, 18-month, and 36-month follow-up.

Missing Data

All variables had fewer than 18% missing data. Cases with missing data differed across variables. Missing data were addressed through multiple imputation, as it generally outperforms other approaches (i.e., listwise deletion, mean substitution) in simulation studies (Croy & Novins, 2005). Participants with complete data on all variables were compared with participants who were missing data on any variable using t-tests and chi-squared tests. No significant differences are found between participants with complete data and those with missing data on any variable with regard to child age, child race, or parent education. However, one minimal significant difference was found. The Pearson chi-square results indicated that participants with missing data and

participants without any missing data were significantly different on child gender ($X^2 = $ 8.161, $df = 1$, $N = 3498$, $p = .004$).

Sample Description

From the total Child Protective Services (CPS) sample ($N = 5,501$), children identified as Asian/Hawaiian/Pacific Islander, other race, or whose race was unknown, missing, or who refused to provide a race were dropped from the analyses. Next, children under the age of two were dropped, as a result of the lack of an adequate measure for behavioral problems for children that young. The final sample size is 3,498 children (including American Indian ($n = 379$), African American ($n = 1128$), and Caucasian ($n = 1991$) ages 2-16 at baseline who experienced child maltreatment investigation. The CPS sample had enough American Indian children ($n = 379$) to conduct the proposed analyses.

Sample Description

The unweighted characteristics at baseline are depicted in Table 2.1 for the total sample, as well as each of the subgroups (i.e., American Indians, African Americans, Caucasians). The mean age of children in the sample was 8.13 years old ($SD = 3.85$) and 51.70% were female. Less than one-fourth (24.20%) of the sample were in out-of-home care. One-fourth (23%) experienced physical abuse as the most severe type of maltreatment, where as less experienced sexual abuse (19.1%) and even fewer experienced neglect (18%). One-fourth (26.2%) had caregivers with less than a high school education. Almost half of these children (48.6%) came from families who received governmental support (e.g., WIC, welfare, foodstamps).

Measures

Note that a number of derived and revised variables have already been established and are available in the NSCAW I data set, which from here on out will be referred to as the "derived and revised variables". Many of these variables were created based on multiple informants and/or multiple waves of data. Additional information about how these variables were constructed can be found in the NSCAW Codebooks (National Data Archive on Child Abuse and Neglect, 2016).

Internalizing and externalizing behavioral problems. Internalizing and externalizing behavior problems are measured using Achenbach's (1991) Child Behavior Checklist (CBCL) at baseline, 18-month, and 36-month follow-up. The CBCL instrument was completed by current caregiver for the child. This measure has well established reliability and validity and has been used in research with similar populations including studies of foster care and mental health (Bellamy, Gopalan & Traube, 2010; Noser & Bickman, 2000). Consistent with previous research, the clinical threshold of a score of 64 or higher was used to measure clinical behavior problems (Bellamy, 2008). The majority of children did not display clinically significant internalizing behavioral problems at 18-month (20.6%) or 36-month (19.2%) follow-up. The majority of children did not display clinically significant externalizing behavioral problems at 18-month (31.2%) or 36-month (29.5%) follow-up.

Total standardized scores. The total standardized scores on the CBCL was to control for behavioral problems at baseline (similar to Bellamy, 2008). The mean total standardized score at baseline was 58.61 ($SD = 12.10$).

Child race. Child race was obtained from the derived and revised variables and reflected the rarest race of the child. Respondents were asked about the race of the child. The response options included American Indian, Asian/Hawaiian/Pacific Islander, Black, White, or Other. When more than race was reported, the rarest race among the five categories was assigned based on the 1990 United States Census. Rarest race order (from rarest to most common) was as follows: American Indian, Asian/Hawaiian/Pacific Islander, Black, White, Other. If a child was identified as American Indian at any time point (baseline, 18-month, 36-month follow-up) they were coded as American Indian. Race categories were dichotomized (0, 1) to create groups of American Indians ($n = 379$), African Americans ($n = 1128$), and Caucasians ($n = 1991$).

Child age. Child age was obtained from the derived and revised variables and reflected the child's age in years. Children's mean age was 8.13 years old ($SD = 3.85$, $Min = 2$, $Max = 16$).

Child gender. Child gender was also obtained from the derived and revised variables reflecting if the child was male (0) or female (1). 51.7% were female ($n = 1810$).

Type of maltreatment. The most severe type of maltreatment allegedly experienced by the child was measured at baseline through a caseworkers' report, which utilized a modified version of the Maltreatment Classification Scale (Manly, Cicchetti, & Barnett, 1994). Response options included: (1) physical maltreatment, (2) sexual maltreatment, (3) emotional maltreatment, (4) physical neglect, (5) neglect – no supervision, (6) abandonment, (7) moral/legal maltreatment, (8) educational

43

maltreatment, (9) exploitation, and (10) other maltreatment. Physical neglect and no supervision were collapsed into neglect. Emotional maltreatment, abandonment, moral/legal maltreatment, educational maltreatment, exploitation, and other maltreatment were collapsed into other maltreatment. Items were dichotomized to represent four categories of maltreatment including physical maltreatment (0 = *No*, 1 = *Yes*) (23%), sexual maltreatment (0 = *No*, 1 = *Yes*) (19.1%), neglect (0 = *No*, 1 = *Yes*) (18%), and other maltreatment (0 = *No*, 1 = *Yes*) (39.9%).

Level of harm. Level of harm was obtained from the derived and revised variables reflecting the level of harm to the child. Respondents were instructed as follows: "For the next set of questions, please do not be concerned with whether or not the report was substantiated when offering your responses. Regardless of the outcome of the investigation, how would you describe the level of harm to the child? Would you say… none, mild, moderate or severe?" The item was coded to the following scale (0 = *none*, 1 = *mild*, 2 = *moderate*, 3 = *severe*). Children's mean level of harm was 1.36 (*SD* = 0.99, *Min* = 0, *Max* = 3).

Level of risk. Level of risk was obtained from the derived and revised variables reflecting the level of severity of risk to the child. Respondents were instructed as follows: "Regardless of the outcome of the investigation, how would you describe the level of severity of risk? Would you say… none, mild, moderate or severe?" The item was coded to the following scale (0 = *none*, 1 = *mild*, 2 = *moderate*, 3 = *severe*). Children's mean level of risk was 1.54 (*SD* = 0.96, *Min* = 0, *Max* = 3).

Out-of-home placement. The out-of-home placement variable was obtained from the derived and revised variables. Placement type was originally obtained from the child, caregiver, and caseworker. Upon review, when discrepancies were found, the first non-missing data from the caregiver, then the child, and then the caseworker was used. Discrepancies were resolved in the derived and revised variables by using the relationship of caregiver, number of children, age, and relationship to children in the household. The variable reflects if the child was in-home (0) or out-of-home at baseline (1). The majority of children were in-home (75.9%) as opposed to placement in out-of-home care (24.1%).

Caregiver education. Caregiver education was obtained from the derived and revised variables based on the current caregivers' report of highest education. The item was coded as "less than high school", "high school", and "high school plus." Caregiver education was dichotomized to represent low educational attainment, specifically whether or not they held a high school diploma or equivalent (0 = *No*, 1 = *Yes*). Approximately one-fourth of the caregivers had less than a high school education (26.2%).

Receipt of governmental support. Government assistance was constructed based on the current caregivers' report of receiving Women Infants and Children (WIC), Temporary Assistance for Needy Families (TANF), or food stamps (similar to Bellamy, 2008). Government assistance was considered a proxy measure of poverty. A dichotomous item was created to represent if the caregiver received at least one form of assistance (WIC, TANF, and/or food stamps) (0 = *No*, 1 = *Yes*). Fewer than half of caregivers received governmental assistance (48.6%).

Neighborhood problems. Neighborhood problems were measured based on the caregivers' report of the presence of concerning community activities including: assaults and muggings, delinquent or gang activity, open drug use and/or dealing, unsupervised children, and groups of teens hanging out. Each item was coded as (not a problem at all, somewhat of a problem, a big problem). However, each of these neighborhood variables was dichotomized to reflect the presence or absence of the neighborhood problem (0 = *No*, 1 = *Yes*). A small number of caregivers reported the presence of assaults and muggings (10.3%), delinquent or gang activity (17.6%), open drug use and/or dealing (21%), unsupervised children (32.2%), and groups of teens hanging out (25.1%). A composite score was also created to represent to represent the sum total of neighborhood problems reported by the caregiver ranging from 0 to 5, with 0 representing no neighborhood and 5 representing the presence of all 5 neighborhood problems. The mean of neighborhood problems was 1.06 (*SD* = 1.51, *Min* = 0, *Max* = 5).

Analytical Procedures

Analyses were performed using Stata Statistical Software: Release 13 (StataCorp, 2013). The sampling and weighting strategy of the NSCAW was implemented through Stata's survey commands. Statistical weights are required in the analysis of NSCAW data. These weights have been adjusted in order to obtain unbiased estimates of population parameters and account for a complex sample design (NSCAW Research Group, 2010). Propensity score matching was used to explore the role of family demands and capabilities, as well as race on displaying clinically significant internalizing and

externalizing behavior problems from baseline to 18-month and 36-month follow-up. In this study, the treatment of interest was race (being American Indian).

A propensity score model is presented to estimate the effect of race on the probability of displaying clinically significant internalizing and externalizing behavior problems. Propensity score matching is a technique used to estimate the effect of a treatment. Comparison groups are matched on important covariates, which are measured before the treatment (Bellamy, 2008; Bellamy, Gopalan, & Traube, 2010). In this study, the treatment of interest is race. In the first step, baseline covariates were used to create balanced comparison groups of American Indian, African American, and Caucasian children. Stata's psmatch2 command was used to establish these balanced groups. Covariates included in this analysis were baseline family demands and capabilities. When acceptable balance was achieved on all covariates, differences between groups can arguably be attributed to the treatment (i.e., race) (Bellamy, Gopalan, & Traube, 2010). Although acceptable balance is difficult to define, in this study acceptable balance was considered achieved when differences on variables in the model were minimized to the extent possible and few (if any) statistically significant differences remained. It is not always possible to have no statistically significant differences, particularly with a large sample size such as the one included in this study. No statistically significant differences remained in the American Indian to Caucasian comparison. However, one significant difference (on the sexual abuse variable) remained in the American Indian to African American comparison. American Indian children were likely to have experienced sexual abuse as the most severe type of maltreatment compared to African American children.

47

In addition to the propensity score, multiple logistic regression was also used. Multiple logistic regression was used to explore the role of race, as well as family demands and capabilities on the probability of internalizing and externalizing behavior problems at 18 and/or 36-month follow-up. The plan for statistical power in the regression analyses was .80 and the sample size of 3,498 was large enough to detect a medium size effect ($p = .05$) (Cohen, 1992). The same independent variables were entered into the propensity score model and the regression equation.

The propensity score model only estimates the effect of race on displaying clinically significant internalizing and externalizing behavior problems after balancing on family demands and capabilities (i.e., holding those variables constant), whereas multiple logistic regression takes into account the effect family demands and capabilities in addition to race. These two analyses together provide a more complete picture of the effect of race, as well as the effects of family demands and capabilities on displaying clinically significant internalizing and externalizing behavior problems.

Results

Descriptive differences between American Indian, Caucasian, and African American children are notable (see Table 2.1). American Indian children had the highest total standardized CBCL score at baseline compared to African American and Caucasian children. American Indian children also had higher levels of risk at baseline compared to African American and Caucasian children. More American Indian and African American children were receiving governmental support and were in out-of-home placement than

48

Caucasian children. Additionally, American Indian and African American children were exposed to greater levels of neighborhood problems compared to Caucasian children.

As displayed in Table 2.2, 31.25% of children in the total sample displayed clinically significant externalizing behavior problems at 18-months. Whereas, at 36-months, approximately 29.50% of children in the total sample displayed clinically significant externalizing behavior problems. Additionally, 20.58% of children in the total sample displayed clinically significant internalizing behavior problems at 18-months. Whereas, at 36-months, approximately 19.21% of children in the total sample displayed clinically significant internalizing behavior problems. Comparison of the break down by racial groups is included in Table 2.2.

Results of the propensity score matching models are as follows. Model 1 included American Indian and Caucasian children. Reasonable balance was achieved for the propensity score matching Model 1, as there were no statistically significant differences at baseline between groups on any of the covariates (see Table 2.3). Model 2 included American Indian and African American children. Reasonable balance was achieved for the propensity score matching Model 2, as there were no statistically significant differences at baseline between groups except for sexual abuse as the most severe type of maltreatment experienced by the child (see Table 2.4).

Table 2.5 presents the estimated effect of race on internalizing and externalizing behavior problems at 18 and/or 36-month follow-up for both Model 1 (American Indian to Caucasian comparison) and Model 2 (American Indian to African American comparison). It is important to note that the effect of race is only significant in Model 1

49

(American Indian to Caucasian comparison) for externalizing behavior problems at 36-month follow-up. Table 2.6 presents the weighted logistic regression of externalizing behavior problems at 18 and/or 36-month follow-up for Model 1 (American Indian to Caucasian comparison). Table 2.7 presents the weighted logistic regression of internalizing behavior problems at 18 and/or 36-month follow-up for Model 1. Race did not have a statistically significant impact on internalizing behavior problems at 18 or 36-month follow-up or externalizing behavior problems at 18-month follow-up in Model 2 (American Indian to African American comparison). However, race did have a statistically significant impact on externalizing behavior problems at 36-month follow-up in Model 1 (American Indian to Caucasian comparison).

Table 2.8 presents the weighted logistic regression of externalizing behavior problems at 18 and/or 36-month follow-up for Model 2 (American Indian to African American comparison). Table 2.9 presents the weighted logistic regression of internalizing behavior problems at 18 and/or 36-month follow-up for Model 2. Race did not have a statistically significant impact on internalizing or externalizing behavior problems at 18 or 36-month follow-up in Model 2.

Discussion

Children in foster care are a vulnerable population facing elevated risks for behavioral problems. Although substantial literature has explored the behavioral problems of children in out-of-home placement, less is known about the behavioral problems of children in the child welfare system, including those investigated for child maltreatment that never experienced out-of-home placement. What is known about the

behavioral problems of children in child welfare suggest that they display elevated or clinically significant behavioral problems (Burns et al., 2004; Farmer et al., 2001; Kortenkamp & Ehrle, 2002; McCrae, 2008; Raghavan, 2010). However, such studies have not included American Indian children and research examining the impact of race on behavioral problems remains sparse. The purpose of this study was to: (1) enhance the understanding of American Indian children in the child welfare system through exploring differences in the probability of displaying clinically significant internalizing and externalizing behavior problems for American Indian children compared to children of other races; and (2) examine the capabilities and demands that are indicators of family functioning following child welfare involvement and their probability to predict displaying clinically significant internalizing and externalizing behavior problems.

As outlined in the results, descriptive differences between American Indian, Caucasian, and African American children were notable at baseline (Table 1). American Indian children had the highest total standardized CBCL score, as well as higher levels of risk, compared to both African American and Caucasian children. Compared to Caucasian children, more American Indian and African American children were receiving governmental support, were in out-of-home placement, and were exposed to greater levels of neighborhood problems.

Descriptively, American Indian children displayed the highest clinically significant behavior problems at 18 and 36-month follow-up compared to both Caucasian and African American children. Hypothesis 1 (i.e., the effect of race – comparing American Indian and Caucasian children – being statistically significant on the

probability of displaying clinically significant internalizing and externalizing behavior problems) was partially supported. Although race did not have a statistically significant impact on internalizing behavior problems, it did have a statistically significant impact on externalizing behavior problems at 36-month follow-up in Model 1. In other words, American Indian children had an increased probability for displaying clinically significant externalizing behavior problems at 36-month follow-up. Hypothesis 2 (i.e., the effect of race – comparing American Indian and African American children – being statistically significant on probability of displaying clinically significant internalizing and externalizing behavior problems) was not supported. These findings suggest that American Indian children are comparable to African American children in their experiences of behavioral problems following child welfare involvement. Similar to African American children, American Indian children experience more externalizing behavior problems when compared to Caucasian children at 36-month follow-up.

Regression analyses presented here comparing American Indian children to Caucasian children suggest the increased probability of displaying clinically significant externalizing behavior problems for American Indian children are, in part, due to exposure to high levels or risk and behavioral problems at baseline, as well as the direct effect of race. Whereas increased probability of displaying clinically significant internalizing behavior problems for American Indian children are, in part, due to exposure to risks, especially through behavioral problems at baseline and the experience of physical and sexual abuse as the most severe type of maltreatment, rather than any direct effect of race in and of itself. The take-away is that although American Indian

52

children are more likely to have behavioral problems, increased probability for displaying clinically significant behavioral problems is not always attributable to any direct effect of race.

A number of contributions were made by this study. First, although the majority of extant research has focused on foster care children, this study included children who experienced a formal child protective services (CPS) investigation/assessment following report of child abuse or neglect. This study expanded the small body of literature that suggests children in child welfare display elevated or clinically significant behavioral problems (Burns et al., 2004; Farmer et al., 2001; Kortenkamp & Ehrle, 2002; McCrae, 2008; Raghavan, 2010) by utilizing a nationally representative sample to investigate the effect of race on the probability of displaying clinically significant internalizing and externalizing behavior problems. Second, although the majority of previous literature has not included American Indian children, this study explored the behavior problems of American Indian children in comparison to Caucasian and African American children after matching these racial groups on a number of important characteristics.

In addition, this study expanded upon previous atheoretical research on behavioral problems through its grounding in Patterson's (2002a, 2002b) Family Adjustment and Adaptation Response (FAAR) theory. FAAR theory offered explanation as to why some children in child welfare remain healthy and do not display clinically significant behavior problems despite facing exposure to certain risks and adversities, while other children display clinically significant behavior problems. In this study, the absence of displaying clinically significant child behavior problems was conceptualized as a positive family-

level outcome (i.e., demonstrating that family is resilient post child welfare involvement). Although American Indian children are disproportionately represented in child welfare, little is known about the behavioral problems (i.e., internalizing and externalizing) for American Indian children.

Given the findings of this study, the research question regarding the effect of race on children's internalizing and externalizing behavior problems warrants additional attention in future studies. The findings from this study highlight the importance of designing interventions aimed at identifying and addressing the behavioral health needs of American Indian in the child welfare system. Given the relationship between a child's behavioral problems at baseline and an increased probability of displaying clinically significant behavior problems at follow-up, interventions targeting children early on during their involvement in the child welfare system may be worth exploring. For instance, intervention programs with promising support for promoting children's well-being among youth in out-of-home placement could be considered for adaptation and implementation with a broader child welfare population (e.g., Fostering Healthy Futures).

Conclusions

Despite the various strengths of this study, limitations are notable. First, limitations related to use and availability of the NSCAW data should be acknowledged. As noted in previous research (e.g., Bellamy, 2008), NSCAW data provide a glimpse into particular periods of time (baseline, 18-month, and 36-month follow-up), but do not highlight the trajectories of children's behavioral problems beyond these selected time points. It may be that children's behavioral problems decrease or increase in relation to

54

events not captured in the data utilized in this study. For instance, if a child recently experienced a reunification, the probability of displaying clinically significant behavior problems may look different, as previous research suggests that children's behavioral problems escalate immediately following reunification.

Second, this study is limited by the confines of secondary data in that it only explores race, as opposed to ethnicity and culture. Although the sample included in this study is nationally representative of the child welfare system, conclusions drawn from these findings should be cautioned. First, this is the first study, to the author's knowledge, exploring the effect of race on children's internalizing and externalizing behavior problems following child welfare involvement. This sample of American Indian children ($n = 379$) may not represent all American Indian children in child welfare. Findings from this study may be specific to this particular sample or may not represent the outcomes of American Indian children in tribal child welfare or those residing in reservation communities. This study did not include variables related to the child's tribal affiliation, enrollment status or living situation being reservation, urban or rural. It is also unclear the extent to which the children included in the sample self-identify as American Indian.

Table 1.1
Unweighted Sample Characteristics at Baseline (n = 456)

	Total Sample			American Indian (n = 44)			African American (n = 227)			Caucasian (n = 185)		
	n	Percent or Mean	SE or SD	n	Percent or Mean	SE or SD	n	Percent or Mean	SE or SD	n	Percent or Mean	SE or SD
Child Characteristics												
Age (2 - 15)		7.98	4.17		10.00	4.00		7.30	4.11		8.32	4.11
Gender												
Female	223	48.90		22	50.00		108	47.60		93	50.30	
Male	233	51.10		22	50.00		119	52.40		92	49.70	
Primary Caregiver and Family Characteristics												
Less than high school education*	52	11.40		04	9.10		30	13.20		18	9.70	
Need/receipt of alcohol or drug service*	199	43.60		19	43.20		100	44.10		80	43.20	
Family Risks												
Receipt of governmental support	181	39.70		11	25.00		111	48.90		59	31.90	
WIC*	121	26.50		06	13.60		72	31.70		43	23.30	
Welfare (TANF, AFDC, general assist)*	63	13.80		05	11.40		40	17.60		18	9.70	
Foodstamps*	35	7.70		02	4.50		27	11.90		6	3.20	
Neighborhood problems (0 - 5)		0.87	1.35		1.00	1.51		0.94	1.43		0.76	1.20
Assaults/Muggings	49	10.70		09	20.50		27	11.90		13	7.00	
Delinquent or Drug Gangs	81	17.80		11	25.00		44	19.40		26	14.10	
Open Drug Use or Dealing	81	17.80		05	11.40		49	21.60		27	14.60	
Unsupervised Children	109	23.90		12	27.30		53	23.20		44	23.80	
Groups of Teens Hanging Out	78	17.10		07	15.90		41	18.10		30	16.20	
Child Welfare Case Characteristics												
Most Severe Type of Maltreatment												
Physical	60	13.20		11	25.00		28	12.30		21	11.40	
Sexual	34	7.50		04	9.10		5	2.20		25	13.50	
Neglect	235	51.50		21	47.70		127	55.90		87	47.00	
Other	125	27.40		08	18.20		65	28.60		52	28.10	
Level of Harm		2.12	0.94		2.07	0.87		1.97	0.99		2.32	0.86
Level of Risk		2.17	1.00		2.34	0.83		2.11	1.02		2.20	1.01
Placement at Baseline												
Kinship Care	131	28.70		08	18.20		73	32.20		50	27.00	
Group Home/Other	48	10.50		10	22.70		20	8.80		18	9.70	
Placement at Baseline												
Foster Care	277	60.70		26	59.10		134	59.00		117	63.20	

Note: * 1 = "yes"; 0 = "no".

56

Table 1.2
Model 1 Weighted Propensity Score Matching Model Post-Match Balance Statistics (n = 229)

	American Indian (n = 44)	Caucasian (n = 185)
Child Characteristics		
Age	**10.00**	**9.95**
Male gender*	0.50	0.50
Emotional or behavioral problem (total score above clinical)*	0.57	0.48
Primary Caregiver and Family Characteristics		
High school education*	0.09	0.05
Need/receipt of alcohol or drug service*	0.43	0.36
Receipt of governmental support*	0.25	0.27
Neighborhood problems	1.00	0.84
Child Welfare Case Characteristics		
Most severe type of maltreatment		
Physical*	0.25	0.16
Sexual*	0.09	0.16
Neglect*	0.48	0.30
Level of harm	2.07	2.41
Level of risk	2.34	2.20
Foster care placement*	0.59	0.61

Note: * 1 = "yes", 0 = "no". Bolded numbers indicated statistically significant difference p <=.05. Numbers in tables are percentages or means depending on the variable type.

Table 1.3

Model 2 Weighted Propensity Score Matching Model Post-Match Balance Statistics (n = 271)

	American Indian (n = 44)	African American (n = 227)
Child Characteristics		
Age	10.00	10.11
Male gender*	0.50	0.50
Emotional or behavioral problem (total score above clinical)*	0.57	0.55
Primary Caregiver and Family Characteristics		
High school education*	0.09	0.23
Need/receipt of alcohol or drug service*	0.43	0.39
Receipt of governmental support*	0.25	0.23
Neighborhood problems	1.00	0.80
Child Welfare Case Characteristics		
Most severe type of maltreatment		
Physical*	0.25	0.14
Sexual*	0.09	0.07
Neglect*	0.48	0.43
Level of harm	2.07	2.18
Level of risk	2.34	2.16
Foster care placement*	0.59	0.70

Note: * 1 = "yes", 0 = "no". Bolded numbers indicated statistically significant difference p <=.05. Numbers in tables are percentages or means depending on the variable type.

Table 1.4

Estimated Effect of Race on Reunification at 18 and/or 36-Month Follow-Up

	American Indian to Caucasian (n = 188)				American Indian to African American (n = 224)			
	Treat. Effect	SE	Confidence Interval		Treat. Effect	SE	Confidence Interval	
Reunification	-.18	.49	-1.13	0.7722922	-.18	.49	-1.13	0.7722922

Note. Treatment effect not significant at the p<.05 level

Table 1.5

American Indian to Caucasian weighted logistic regression of reunification at 18 and/or 36-month follow-up (n = 188)

	OR	*P*	Confidence Interval	
Race				
American Indian (Caucasian comparison group)	0.84	0.71	0.32	2.16
Child Characteristics				
Age	0.94	0.23	0.85	1.04
Male gender*	0.50	0.10	0.21	1.15
Emotional or behavioral problem (total score above clinical)*	0.82	0.64	0.37	1.85
Primary Caregiver and Family Characteristics				
High school education*	0.77	0.66	0.23	2.55
Need/receipt of alcohol or drug service*	0.85	0.69	0.38	1.88
Receipt of governmental support*	0.61	0.26	0.25	1.46
Neighborhood problems	0.96	0.80	0.68	1.34
Child Welfare Case Characteristics				
Most severe type of maltreatment				
Physical*	0.97	0.97	0.26	3.66
Sexual*	0.86	0.83	0.22	3.38
Neglect*	0.50	0.17	0.18	1.35
Level of harm	1.26	0.31	0.80	1.97
Level of risk	1.00	0.99	0.67	1.49
Foster care placement*	0.52	0.15	0.22	1.26

Table 1.6
American Indian to African American weighted logistic regression of reunification at 18 and/or 36-month follow-up (n = 224)

	OR	P	Confidence Interval	
Race				
American Indian (African American comparison group)	0.64	0.38	0.24	1.72
Child Characteristics				
Age	1.01	0.89	0.92	1.10
Male gender*	1.00	1.00	0.49	2.04
Emotional or behavioral problem (total score above clinical)*	0.91	0.81	0.43	1.94
Primary Caregiver and Family Characteristics				
High school education*	0.87	0.80	0.29	2.61
Need/receipt of alcohol or drug service*	0.86	0.68	0.43	1.74
Receipt of governmental support*	0.94	0.88	0.44	2.03
Neighborhood problems	1.02	0.86	0.80	1.30
Child Welfare Case Characteristics				
Most severe type of maltreatment				
Physical*	1.55	0.49	0.45	5.29
Sexual* (omitted)				
Neglect*	1.01	0.99	0.38	2.69
Level of harm	0.96	0.84	0.63	1.45
Level of risk	0.77	0.21	0.51	1.16
Foster care placement*	0.60	0.19	0.28	1.29

Table 2.1
Unweighted Sample Characteristics at Baseline (n = 3,498)

	Total Sample			American Indian (n = 379)			African American (n = 1128)			Caucausian (n = 1991)		
	n	Percent or Mean	SE or SD	n	Percent or Mean	SE or SD	n	Percent or Mean	SE or SD	n	Percent or Mean	SE or SD
Child Characteristics												
Age (2 - 16)		8.13	3.85		8.66	3.73		8.18	3.86		8.01	3.86
Gender												
Female	1810	51.70		215	56.70		566	50.20		1029	51.70	
Male	1688	48.30		164	43.30		562	49.80		962	48.30	
Total Standardized CBCL Score		58.61	12.10		60.69	12.15		57.47	12.44		58.86	11.83
Primary Caregiver and Family Characteristics												
Less than high school education*	915	26.20		100	26.40		295	26.20		520	26.10	
Family Risks												
Receipt of governmental support	1699	48.60		205	54.10		645	57.20		849	42.60	
WIC*	804	23.00		93	24.50		292	25.90		419	21.00	
Welfare (TANF, AFDC, general assist)*	704	20.10		94	24.80		311	27.60		299	15.00	
Foodstamps*	1205	34.40		153	40.40		480	42.60		572	28.70	
Neighborhood problems (0 - 5)		1.06	1.51		1.16	1.54		1.31	1.69		0.91	1.36
Assaults/Muggings	362	10.30		42	11.10		168	14.90		152	7.60	
Delinquent or Drug Gangs	614	17.60		75	19.80		282	25.00		257	12.90	
Open Drug Use or Dealing	736	21.00		90	23.70		328	29.10		318	16.00	
Unsupervised Children	1128	32.20		143	37.70		362	32.10		623	31.30	
Groups of Teens Hanging Out	877	25.10		90	23.70		332	29.40		455	22.90	
Child Welfare Case Characteristics												
Most Severe Type of Maltreatment												
Physical	805	23.00		75	19.80		262	23.20		468	23.50	
Sexual	667	19.10		84	22.20		194	17.20		389	19.50	
Neglect	629	18.00		75	19.80		193	17.10		361	18.10	
Other	1397	39.90		145	38.30		479	42.50		773	38.80	
Level of Harm (0-3)		1.36	0.99		1.49	1.03		1.33	0.97		1.34	0.99
Level of Risk (0-3)		1.54	0.96		1.73	0.95		1.52	0.96		1.52	0.96
Out-of-home Placement*	844	24.10		99	26.10		335	29.70		410	20.60	

Note: * 1 = "yes", 0 = "no".

Table 2.2

Weighted Internalizing and Externalizing Behavior Problems Across Follow-Up (n = 3,498)

	18 mo.		36 mo.	
	n	%	N	%
Clinically significant externalizing behavior problems				
Total Sample	1093	31.25	1032	29.50
American Indian	139	36.68	124	32.72
African American	351	31.12	316	28.01
Caucasian	603	30.29	592	29.73
Clinically significant internalizing behavior problems				
Total Sample	720	20.58	672	19.21
American Indian	113	29.82	96	25.33
African American	206	18.26	182	16.13
Caucasian	401	20.14	394	19.79

Table 2.3

Model 1 Weighted Propensity Score Matching Model Post-Match Balance Statistics (n = 2,370)

	American Indian (n = 379)	Caucasian (n = 1991)
Child Characteristics		
Age	8.66	8.59
Female gender* (0 Male, 1 Female)	0.57	0.53
Emotional or behavioral problem (total standardized CBCL score)	60.69	61.53
Primary Caregiver and Family Characteristics		
Less than high school education*	0.26	0.27
Receipt of governmental support*	0.54	0.52
Neighborhood problems	1.16	1.30
Child Welfare Case Characteristics		
Most severe type of maltreatment		
Physical*	0.20	0.18
Sexual*	0.22	0.25
Neglect*	0.20	0.21
Level of harm (0-3)	1.49	1.49
Level of risk (0-3)	1.73	1.72
Out-of-home placement	0.26	0.24

Note: * 1 = "yes", 0 = "no". Bolded numbers indicated statistically significant difference p <=.05.

Table 2.4

Model 2 Weighted Propensity Score Matching Model Post-Match Balance Statistics (n = 1,507)

	American Indian (n = 379)	African American (n = 1128)
Child Characteristics		
Age	8.66	8.66
Female gender* (0 Male, 1 Female)	0.57	0.55
Emotional or behavioral problem (total standardized CBCL score)	60.69	61.05
Primary Caregiver and Family Characteristics		
Less than high school education*	0.26	0.26
Receipt of governmental support*	0.54	0.53
Neighborhood problems	1.16	1.17
Child Welfare Case Characteristics		
Most severe type of maltreatment		
Physical*	0.20	0.19
Sexual*	**0.22**	**0.16**
Neglect*	0.20	0.23
Level of harm (0-3)	1.49	1.48
Level of risk (0-3)	1.73	1.71
Out-of-home placement	0.26	0.25

Note: * 1 = "yes", 0 = "no". Bolded numbers indicated statistically significant difference p <=.05.

Table 2.5
Estimated Effect of Race on Behavior Problems at 18 and 36-month follow-up.

	Model 1: American Indian to Caucasian				Model 2: American Indian to African American			
	Treat. Effect		SE	Confidence Interval		Treat. Effect	SE	Confidence Interval	
Externalizing behavior problems								
18-Month Follow-Up	-.28		.24	-.74	.19	.01	.25	-.47	.50
36-Month Follow-Up	-.53	**	.24	-1.00	-.05	-.05	.23	-.50	.39
Internalizing behavior problems								
18-Month Follow-Up	.06		.22	.38	.50	.14	.24	-.32	.61
36-Month Follow-Up	-.22		.21	-.63	.20	-.09	.22	-.53	.35

*Significant at the p<.05 level
**Significant at the p<.01 level

Table 2.6

Model 1 weighted logistic regression of externalizing behavior problems (n = 835)

	18-Month Follow-Up				36-Month Follow-Up			
	OR	*P*	Confidence Interval		OR	P	Confidence Interval	
Race								
American Indian (Caucasian comparison group)	0.76	0.248	0.47	1.21	0.59	**0.030**	0.37	0.95
Child Characteristics								
Age	1.03	0.241	0.98	1.08	0.99	0.592	0.94	1.03
Female gender* (0 Male, 1 Female)	1.05	0.781	0.73	1.51	0.92	0.630	0.66	1.25
Total standardized score on CBCL	1.08	**0.001**	1.05	1.10	1.04	**0.001**	1.03	1.06
Primary Caregiver and Family Characteristics								
Less than high school education*	0.87	0.512	0.56	1.33	1.11	0.613	0.75	1.63
Receipt of governmental support*	1.43	**0.048**	1.00	2.03	1.23	0.252	0.86	1.75
Neighborhood problems	1.18	**0.015**	1.03	1.36	1.02	0.797	0.90	1.15
Child Welfare Case Characteristics								
Most severe type of maltreatment								
Physical*	1.13	0.599	0.72	1.78	1.46	0.090	0.94	2.26
Sexual*	0.90	0.656	0.55	1.45	1.15	0.565	0.72	1.82
Neglect*	0.84	0.525	0.50	1.42	0.86	0.530	0.53	1.39
Level of harm	1.12	0.404	0.86	1.46	0.78	0.070	0.60	1.02
Level of risk	0.90	0.448	0.68	1.19	1.35	**0.038**	1.02	1.79
Out-of-home placement*	1.21	0.391	0.78	1.89	1.08	0.735	0.70	1.66

Note. Bolded numbers indicated statistically significant difference.

Table 2.7
Model 1 weighted logistic regression of internalizing behavior problems (n = 835)

	18-Month Follow-Up				36-Month Follow-Up			
	OR	P	Confidence Interval		OR	P	Confidence Interval	
Race								
American Indian (Caucasian comparison group)	1.06	0.781	0.69	1.65	0.81	0.306	0.53	1.22
Child Characteristics								
Age	0.99	0.744	0.95	1.04	1.00	0.878	0.95	1.04
Female gender* (0 Male, 1 Female)	0.90	0.541	0.64	1.26	1.08	0.641	0.79	1.48
Total standardized score on CBCL	1.08	**0.001**	1.06	1.10	1.00	0.791	0.99	1.02
Primary Caregiver and Family Characteristics								
Less than high school education*	1.00	0.997	0.67	1.49	1.05	0.772	0.74	1.51
Receipt of governmental support*	0.75	0.120	0.52	1.08	0.82	0.239	0.59	1.14
Neighborhood problems	1.37	**0.001**	1.22	1.55	1.07	0.223	0.96	1.20
Child Welfare Case Characteristics								
Most severe type of maltreatment								
Physical*	0.48	**0.002**	0.30	0.77	1.07	0.766	0.70	1.62
Sexual*	0.58	**0.029**	0.36	0.95	1.01	0.972	0.65	1.56
Neglect*	1.00	0.988	0.63	1.60	0.93	0.764	0.59	1.47
Level of harm	1.26	0.086	0.97	1.63	0.84	0.172	0.66	1.08
Level of risk	1.01	0.930	0.77	1.33	1.22	0.114	0.95	1.57
Out-of-home placement*	0.66	0.065	0.42	1.03	0.78	0.206	0.52	1.15

Note. Bolded numbers indicated statistically significant difference.

Table 2.8
Model 2 weighted logistic regression of externalizing behavior problems (n = 479)

	18-Month Follow-Up				36-Month Follow-Up			
	OR	*P*	Confidence Interval		OR	P	Confidence Interval	
Race								
American Indian (African American comparison group)	1.01	0.952	0.63	1.64	0.95	0.812	0.61	1.48
Child Characteristics								
Age	1.07	**0.040**	1.00	1.14	1.03	0.347	0.97	1.09
Female gender* (0 Male, 1 Female)	1.21	0.411	0.77	1.93	0.99	0.963	0.65	1.52
Total standardized score on CBCL	1.08	**0.001**	1.06	1.11	1.03	**0.002**	1.01	1.05
Primary Caregiver and Family Characteristics								
Less than high school education*	1.62	**0.049**	1.00	2.61	1.36	0.187	0.86	2.13
Receipt of governmental support*	1.37	0.182	0.86	2.16	0.93	0.728	0.61	1.42
Neighborhood problems	1.09	0.220	0.95	1.15	1.03	0.673	0.91	1.17
Child Welfare Case Characteristics								
Most severe type of maltreatment								
Physical*	0.68	0.232	0.36	1.28	0.89	0.679	0.50	1.57
Sexual*	1.02	0.951	0.57	1.81	1.14	0.649	0.64	2.05
Neglect*	0.69	0.276	0.36	1.34	0.90	0.710	0.50	1.60
Level of harm	1.06	0.746	0.75	1.48	1.05	0.742	0.77	1.43
Level of risk	0.75	0.098	0.54	1.05	0.89	0.453	0.65	1.21
Out-of-home placement*	1.19	0.527	0.70	2.02	1.03	0.896	0.63	1.70

Table 2.9

Model 2 weighted logistic regression of internalizing behavior problems (n = 479)

| | 18-Month Follow-Up | | | | 36-Month Follow-Up | | | |
	OR	P	Confidence Interval		OR	P	Confidence Interval	
Race								
American Indian (African American comparison group)	1.15	0.544	0.73	1.84	0.91	0.693	0.59	1.42
Child Characteristics								
Age	1.04	0.311	0.97	1.11	0.96	0.158	0.90	1.02
Female gender* (0 Male, 1 Female)	0.64	0.056	0.41	1.01	0.98	0.908	0.64	1.49
Total standardized score on CBCL	1.06	**0.001**	1.04	1.08	1.00	0.763	0.99	1.02
Primary Caregiver and Family Characteristics								
Less than high school education*	0.91	0.705	0.55	1.50	1.06	0.807	0.67	1.69
Receipt of governmental support*	0.70	0.137	0.44	1.12	0.82	0.361	0.54	1.25
Neighborhood problems	1.12	0.081	0.99	1.27	1.06	0.328	0.94	1.20
Child Welfare Case Characteristics								
Most severe type of maltreatment								
Physical*	0.38	**0.002**	0.20	0.71	1.13	0.667	0.65	1.95
Sexual*	0.90	0.726	0.51	1.59	1.19	0.548	0.67	2.10
Neglect*	0.71	0.284	0.38	1.33	1.29	0.396	0.72	2.30
Level of harm	1.06	0.747	0.76	1.46	1.07	0.656	0.80	1.43
Level of risk	0.96	0.799	0.68	1.35	0.88	0.392	0.65	1.19
Out-of-home placement*	0.67	0.154	0.39	1.16	0.96	0.880	0.60	1.55

70

Bibliography

Achenbach, T. M., & Edelbrock, C. S. (1978). The classification of child psychopathology: A review and analysis of empirical efforts. *Psychological Bulletin, 85,* 1275-1301. Retrieved from http://dx.doi.org.ezp3.lib.umn.edu/10.1037/0033-2909.85.6.1275

Achenbach, T. M. (1991). *Manual for the child behavior checklist/4-18 and 1991 profile*. Burlington, VT: University Associates of Psychiatry.

Adolph, K. E., & Robinson, S. R. (2011). Sampling development. *Journal of Cognition and Development*, *12*, 411-423. doi:10.1080/15248372.2011.608190

Akin, B. A. (2011). Predictors of foster care exits to permanency: A competing risks analysis of reunification, guardianship, and adoption. *Children and Youth Services Review*, *33*, 999-1011. doi:10.1016/j.childyouth.2011.01.008

Atwood, B. A. (2008). Achieving permanency for American Indian and Alaska Native children: Lessons from tribal traditions. *The Capital University Law Review, 37,* 239-292.

Berger, L. M., Bruch, S. K., Johnson, E. I., James, S., & Rubin, D. (2009). Estimating the "impact" of out-of-home placement on child well-being: Approaching the problem of selection bias. *Child Development*, *80*(6), 1856-1876. doi:10.1111/j.14678624.2009.01372.x

Bellamy, J. L. (2008). Behavioral problems following reunification of children in long-term foster care. *Children and Youth Services Review, 30*(2), 216-228. doi:10.1016/j.childyouth.2007.09.008

Bellamy, J. L., Gopalan, G., & Traube, D. E. (2010). A national study of the impact of outpatient mental health services for children in long-term foster care. *Clinical Child Psychology and Psychiatry*, *15*(4), 467-479. doi:10.1177/1359104510377720

Brook, J., McDonald, T. P., Gregoire, T., Press, A., & Hindman, B. (2010). Parental substance abuse and family reunification. *Journal of Social Work Practice in the Addictions*, 10(4), 393-412. doi:10.1080/1533256X.2010.521078

Brook, J., & McDonald, T. (2009). The impact of parental substance abuse on stability of family reunifications from foster care. *Children and Youth Services Review, 31*(2), 193-198. doi:10.1016/j.childyouth.2008.07.010

Bruskas, D. (2008). Children in foster care: A vulnerable population at risk. *Journal of Child and Adolescent Psychiatric Nursing*, *21*(2), 70-77. doi:10.1111/j.1744-6171.2008.00134.x

Burns, B.J., Phillips, S.D., Wagner, H.R., Barth, R.P., Kilko, 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 and Adolescent Psychology*, 43, 960-970. doi:10.1097/01.chi.0000127590.95585.65

Bussey, M., & Lucero, N. M. (2013). Re-examining child welfare's response to ICWA: Collaborating with community-based agencies to reduce disparities for American Indian/Alaska Native children. *Children and Youth Services Review*, *35*, 394-401.

doi:10.1016/j.childyouth.2012.12.021

Carolinas HealthCare System (2015). What is behavioral health? Retrieved from
http://www.carolinashealthcare.org/what-is-behavioral-health

Carter, V. B. (2010). Factors predicting placement of urban American Indian/Alaskan
Natives into out-of-home care. *Children and Youth Services Review, 32,* 657-663.
doi:10.1016/j.childyouth.2009.12.013

Carter, V. B. (2009). Prediction of placement into out-of-home care for American
Indian/Alaskan Natives compared to non-Indians. *Children and Youth Services
Review, 31,* 840-846. doi:10.1016/j.childyouth.2009.03.006

Cheng, T. C. (2010). Factors associated with reunification: A longitudinal analysis of
long-term foster care. *Children and Youth Services Review, 32,* 1311-1316.
doi:10.1016/j.childyouth.2010.04.023

Child Welfare Information Gateway (2013a). *Foster care statistics 2011.* Washington,
DC: U.S. Department of Health and Human Services, Children's Bureau.

Child Welfare Information Gateway (2013b). *Foster care statistics 2012.* Washington,
DC: U.S. Department of Health and Human Services, Children's Bureau.

Child Welfare Information Gateway. (2013c). *How the child welfare system works.*
Washington, DC: U.S. Department of Health and Human Services, Children's
Bureau. Retrieved from https://www.childwelfare.gov/pubPDFs/cpswork.pdf
https://www.childwelfare.gov/pubPDFs/family_reunification.pdf

Child Welfare Information Gateway (2012). *Supporting reunification and preventing
reentry into out-of-home care.* Washington, DC: U.S. Department of Health and
Human Services, Children's Bureau. Retrieved from
https://www.childwelfare.gov/pubPDFs/srpr.pdf

Child Welfare Information Gateway. (2011). *Child maltreatment prevention: Past,
present, and future.* Washington, DC: U.S. Department of Health and Human
Services, Children's Bureau. Retrieved from
https://www.childwelfare.gov/pubPDFs/cm_prevention.pdf

Child Welfare Information Gateway (2011). *Family reunification: What the evidence
shows.* Washington, DC: U.S. Department of Health and Human Services,
Children's Bureau. Retrieved from
https://www.childwelfare.gov/pubPDFs/family_reunification.pdf

Clausen, J. M., Landsverk, J., Ganger, W., Chadwick, D., & Litrownik, A. (1998).
Mental health problems of children in foster care. *Journal of Child and Family
Studies, 7*(3), 283-296. doi:10.1023/A:1022989411119

Connell, C. M., Bergeron, N., Katz, K. H., Saunders, L., & Tebes, J. K. (2007). Re-
referral to child protective services: The influence of child, family, and case
characteristics on risk status. *Child Abuse & Neglect, 31*(5), 573-588.
doi:10.1016/j.chiabu.2006.12.004

Connell, C. M., Katz, K. H., Saunders, L., & Tebes, J. K. (2006). Leaving foster care -
The influence of child and case characteristics on foster care exit rates. *Children
and Youth Services Review, 28*(7), 780-798. doi:10.1016/j.childyouth.2005.08.007

Courtney, M. E., & Hook, J. L. (2012a). Evaluation of the impact of enhanced parental
legal representation on the timing of permanency outcomes for children in foster

care. *Children and Youth Services Review, 34*(7), 1337-1343. doi:10.1016/j.childyouth.2012.03.016

Courtney, M. E., & Hook, J. L. (2012b). Timing of exits to legal permanency from out-of-home care: The importance of systems and implications for assessing institutional accountability. *Children and Youth Services Review, 34*, 2263-2272. doi:10.1016/j.childyouth.2012.08.004

Crofoot, T. L., & Harris, M. S. (2012). An Indian Child Welfare perspective on disproportionality in child welfare. *Children and Youth Services Review*, *34*, 1667-1674. doi:10.1016/j.childyouth.2012.04.028

Croy, C. D. & Novins, D. K. (2005). Methods for addressing missing data in psychiatric and developmental research. *Journal of the American Academy of Adolescent and Child Psychiatry, 44*(12),1230–1240. doi:10.1097/01.chi.0000181044.06337.6f

D'Andrade, A. C., & Chambers, R. M. (2012). Parental problems, case plan requirements, and service targeting in child welfare reunification. *Children and Youth Services Review, 34*, 2131-2138. doi: 10.1016/j.childyouth.2012.07.008

D'Andrade, A. C. (2009). The differential effects of concurrent planning practice elements on reunification and adoption. *Research on Social Work Practice, 19*(4), 446-459. doi:10.1177/1049731508329388

Dowd, K., Kinsey, S., Wheeless, S., Thissen, R., Richardson, J., Mierzwa, F., & Biemer, P. (2002). National Survey of Child and Adolescent Well-being (NSCAW): Introduction to the wave 1 general and restricted use releases. *National Data Archive on Child Abuse and Neglect, Cornell University Ithaca, NY, 14853.* Retrieved from http://www.ndacan.cornell.edu/datasets/ pdfs_user_guides/IntroNSCAWWave1.pdf

English, D. J., Marshall, D. B., Brummel, S., & Orme, M. (1999). Characteristics of repeated referrals to child protective services in Washington State. *Child Maltreatment, 4*(4), 297–307. doi:10.1177/1077559599004004003

Farmer, E. M., Burns, B. J., Chapman, M. V., Phillips, S. D., Angold, A., & Costello, E. J. (2001). Use of mental health services by youth in contact with social services. *Social Service Review*, *75*(4), 605-624. Retrieved from http://www.jstor.org.ezp3.lib.umn.edu/stable/10.1086/323165

Farmer, E. M., Southerland, D., Mustillo, S. A., & Burns, B. J. (2009). Returning home in systems of care: Rates, predictors, and stability. *Journal of Emotional and Behavioral Disorders, 17*(3), 133-146. doi:10.1177/1063426608327002

Fraser, M. W., Walton, E., Lewis, R. E., Pecora, P. J., & Walton, W. K. (1996). An experiment in family reunification: Correlates of outcomes at one-year follow-up. *Children and Youth Services Review, 18*, 335-361. doi:10.1016/0190-7409(96)00009-6

Garland, A., Landsverk, J., Hough, R., & Ellis-MacLeod, E. (1996). Type of maltreatment as a predictor of mental health service use for children in foster care. *Child Abuse and Neglect,* 20(8), 675–688. doi:10.1016/0145-2134(96)00056-7

Garland, A. F., Hough, R. L., Landsverk, J. A., McCabe, K. M., Yeh, M., Ganger, W. C., & Reynolds, B. J. (2000). Racial and ethnic variations in mental health care

utilization among children in foster care. *Children's services: Social policy, research, and practice*, *3*(3), 133-146. doi:10.1207/S15326918CS0303_1

Garland, A. F., Landsverk, J. A., & Lau, A. S. (2003). Racial/ethnic disparities in mental health service use among children in foster care. *Children and Youth Services Review*, *25*(5-6), 491-507. doi:10.1016/S0190-7409(03)00032-X

Graham, L. M. (2008). Reparations, self-determination, and the seventh generation. *Harvard Human Rights Journal*, *21*, 47-103. Retrieved from http://harvardhrj.com/archive/

Grant, T., Huggins, J., Graham, J. C., Ernst, C., Whitney, N., & Wilson, D. (2011). Maternal substance abuse and disrupted parenting: Distinguishing mothers who keep their children from those who do not. *Children and Youth Services Review, 33*(11), 2176-2185. doi:10.1016/j.childyouth.2011.07.001

Green, B. L., Rockhill, A., & Furrer, C. (2007). Does substance abuse treatment make a difference for child welfare case outcomes? A statewide longitudinal analysis. *Children and Youth Services Review, 29*, 460–473. doi:10.1016/j.childyouth.2006.08.006

Greenstein, T. N. (2006). *Methods of family research*. Thousand Oaks, CA: Sage Publications.

Halfon, N., Mendonca, A., & Berkowitz, G. (1995). Health status of children in foster care: The experience of the Center for the Vulnerable Child. *Archives of Pediatric and Adolescent Medicine, 149*(4), 386–92. doi:10.1001/archpedi.1995.02170160040006

Heflinger, C. A., Simpkins, C. G., & Combs-Orme, T. (2000). Using the CBCL to determine the clinical status of children in state custody. *Children and Youth Services Review*, *22*(1), 55-73. doi:10.1016/S0190-7409(99)00073-0

Hill, N. E., Murry, V.M., & Anderson, V. D. (2005). Sociocultural contexts of African American families. In V. C. McLoyd, N. E. Hill, & K. A. Dodge (Eds.), *Diversity in African American Family Life: Context, Adaptation*, *and Policy* (pp. 21-44). New York: Guilford.

Hinshaw, S. P. (1992). Externalizing behavior problems and academic underachievement in childhood and adolescence: causal relationships and underlying mechanisms. *Psychological Bulletin*, *111*(1), 127-155. Retrieved from http://dx.doi.org.ezp1.lib.umn.edu/10.1037/0033-2909.111.1.127

Hochstadt, N. J., Jaudes, P. K., Zimo, D. A., & Schachter, J. (1987). The medical and psychosocial needs of children entering foster care. *Child Abuse & Neglect, 11*(1), 53-62. doi:10.1016/0145-2134(87)90033-0

Horwitz, S. M., Hurlburt, M. S., Heneghan, A., Zhang, J., Rolls-Reutz, J., Fisher, E., ... & Stein, R. E. (2012). Mental health problems in young children investigated by US child welfare agencies. *Journal of the American Academy of Child & Adolescent Psychiatry*, *51*(6), 572-581. doi:10.1016/j.jaac.2012.03.006

Hulsey, T. C., & White, R. (1989). Family characteristics and measures of behavior in foster and non-foster children*. American Journal of Orthopsychiatry, 59*(4), 502–509. Retrieved from http://dx.doi.org.ezp3.lib.umn.edu/10.1111/j.1939-0025.1989.tb02739.x

James, S., Landsverk, J., Slymen, D. J., & Leslie, L. K. (2004). Predictors of outpatient mental health service use – the role of foster care placement change. *Mental Health Services Research*, *6*(3), 127-141. doi:10.1023/B:MHSR.0000036487.39001.51

Jewell, J. D., Brown, D. L., Smith, G., & Thompson, R. (2010). Examining the influence of caregiver ethnicity on youth placed in out of home care: Ethnicity matters–for some. *Children and Youth Services Review*, *32*(10), 1278-1284. doi:10.1016/j.childyouth.2010.04.019

Jones, L. (1998). The social and family correlates of successful reunification of children in foster care. *Children and Youth Services Review, 20*(4), 305-323. doi:10.1016/S0190-7409(98)00009-7

Kortenkamp, K., & Ehrle, J. (2002). *The Well-Being of Children Involved with the Child Welfare System: A National Overview. New Federalism: National Survey of America's Families, Series B, No. B-43. Assessing the New Federalism: An Urban Institute Program To Assess Changing Social Policies*. Washington, DC: The Urban Institute.

Lambert, L., Essen, J., & Head, J. (1977). Variations in behaviour ratings of children who have been in care. *Journal of Child Psychology Psychiatry, 18*, 335–46. doi:10.1111/j.1469-7610.1977.tb00445.x

Landers, A. L., Danes, S. M., & White Hawk, S. (2015). Finding their way home: The Reunification of American Indian Adoptees. *First Peoples Child & Family Review, 10*(2), 18-30. Retrieved from https://turtletalk.files.wordpress.com/2015/12/267-611-1-pb.pdf

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 and Adolescent Psychology*, 43, 960–970. doi:10.1097/01.chi.0000127590.95585.65

Landsverk, J., Davis, I., Ganger, W., Newton, R., & Johnson, I. (1996). Impact of child psychological functioning on reunification from out of home care. *Children and Youth Services Review, 18*(4–5), 447−462. doi:10.1016/0190-7409(96)00014-X

Leathers, S. (2002). Parental visiting and family reunification: Could inclusive practice make a difference? *Child Welfare, 81*(4), 595−616. Retrieved from http://search.ebscohost.com.ezp2.lib.umn.edu/login.aspx?direct=true&db=aph&AN=6907358&site=eds-live

Leslie, L. K., Hurlburt, M. S., James, S., Landsverk, J., Slymen, D. J., & Zhang, J. (2014). Relationship between entry into child welfare and mental health service use. *Psychiatric Services*. doi:10.1176/appi.ps.56.8.981

Libby, A. M., Orton, H. D., Barth, R. P., Webb, M. B., Burns, B. J., Wood, P. A., & Spicer, P. (2007). Mental health and substance abuse services to parents of children involved with child welfare: A study of racial and ethnic differences for American Indian parents. *Administration and Policy in Mental Health and Mental Health Services Research, 34*(2), 150-159. doi:10.1007/s10488-006-0099-2

Libby, A. M., Orton, H. D., Barth, R. P., Webb, M. B., Burns, B. J., Wood, P., & Spicer, P. (2006). Alcohol, drug, and mental health specialty treatment services and

race/ethnicity: A national study of children and families involved with child welfare. *American Journal of Public Health*, *96*(4), 628-631. doi:10.2105/AJPH.2004.059436

Lowry, M. R. (2004). Putting teeth into the AFSA: The need for statutory minimum standards. *Children and Youth Services Review, 26*, 1021−1031. doi:10.1016/j.childyouth.2004.08.003

Malm, K. E., & Zielewski, E. H. (2009). Nonresident father support and reunification outcomes for children in foster care. *Children and Youth Services Review, 31*(9), 1010-1018. doi:10.1016/j.childyouth.2009.04.016

Marcenko, M. O., Lyons, S. J., & Courtney, M. (2011). Mothers' experiences, resources and needs: The context for reunification. *Children and Youth Services Review, 33*, 431-438. doi:10.1016/j.childyouth.2010.06.020

McCrae, J. S. (2008). Emotional and behavioral problems reported in child welfare over 3 years. *Journal of Emotional and Behavioral Disorders*, doi:10.1177/1063426608319141

McDonald, T. P., Poertner, J., & Jennings, M. A. (2007). Permanency for children in foster care: A Competing risks analysis. *Journal of Social Service Research, 33*(4), 45-56. doi:10.1300/J079v33n04_04

McWey, L. M., Acock, A., & Porter, B. E. (2010). The impact of continued contact with biological parents upon the mental health of children in foster care. *Children and Youth Services Review*, *32*(10), 1338-1345. doi:10.1016/j.childyouth.2010.05.003

Merriam-Webster (2015). Behavior problems. Retrieved from http://www.merriam-webster.com/dictionary/behavior%20problem

Miller, K. A., Fisher, P. A., Fetrow, B., & Jordan, K. (2006). Trouble on the journey home: Reunification failures in foster care. *Children and Youth Services Review*, *28*, 260-274. doi:10.1016/j.childyouth.2005.03.010

National Data Archive on Child Abuse and Neglect (2016). The National Survey on Child and Adolescent Well-being II (NSCAW II) Restricted Release [Data files and codebooks]. Available from National Data Archive on Child Abuse and Neglect website: http://www.ndacan.cornell.edu/datasets/dataset-details.cfm?ID=154

National Indian Child Welfare Association (2014a, February 15*). American Indian children and families*. Retrieved from http://www.nicwa.org/children_families/

National Indian Child Welfare Association (2014b, February 15). *Child abuse prevention.* Retrieved from http://www.nicwa.org/child_abuse_prevention/

National Indian Child Welfare Association (NICWA) (2007). Time for reform: A matter of justice for American Indian and Alaskan Native children. Portland, OR.

NSCAW Research Group (2010). National Survey of Child and Adolescent Well-Being: Overview of NSCAW and NSCAW II, and main findings of NSCAW. Meeting of the Cornell University Summer Research Institute, Ithaca, NY. Retrieved from http://www.ndacan.cornell.edu/presentations/overview_of_nscaw_i_and_ii.pdf

O'Brien, M. (2005). Studying individual and family development: Linking theory and research. *Journal of Marriage and Family*, *67*, 880-890. doi:10.1111/j.1741-3737.2005.00181.x

Patterson, J. M. (2002a). Integrating family resilience and family stress theory. *Journal of Marriage and Family*, *64*(2), 349-360. doi:10.1111/j.1741-3737.2002.00349.x

Patterson, J. M. (2002b). Understanding family resilience. *Journal of Clinical Psychology*, *58*(3), 233-246. doi:10.1002/jclp.10019

Patterson, J. M. (1988). Families experiencing stress: I. The Family Adjustment and Adaptation Response Model: II. Applying the FAAR Model to health-related issues for intervention and research. *Family Systems Medicine*, *6*(2), 202-237. http://dx.doi.org.ezp2.lib.umn.edu/10.1037/h0089739

Pecora, P. J., Jensen, P. S., Romanelli, L. H., Jackson, L. J., & Ortiz, A. (2009). Mental health services for children placed in foster care: An overview of current challenges. *Child Welfare*, *88*(1), 5-26. Retrieved from http://www.ncbi.nlm.nih.gov.ezp3.lib.umn.edu/pmc/articles/PMC3061347/

Pecora, P. J. (2010). Why current and former recipients of foster care need high quality mental health services. *Administration and Policy in Mental Health and Mental Health Services Research*, *37*(1-2), 185-190. doi:10.1007/s10488-010-0295-y

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, *63*, 539-569. doi:10.1146/annurev-psych-120710-100452

Raghavan, R., Inoue, M., Ettner, S. L., Hamilton, B. H., & Landsverk, J. (2010). A preliminary analysis of the receipt of mental health services consistent with national standards among children in the child welfare system. *American Journal of Public Health*, *100*(4), 742-749. doi:10.2105/AJPH.2008.151472

Reis, H. T. (2000). Writing effectively about design. In R. J. Sternberg (Ed.), *Guide to Publishing in Psychology Journals*. Cambridge, UK: Cambridge University Press, (p.81-97).

Rockhill, A., Green, B. L., & Furrer, C. (2007). Is the adoption and safe families act influencing child welfare outcomes for families with substance abuse issues?. *Child Maltreatment, 12*(1), 7-19. doi:10.1177/1077559506296139

Shaw, T. V. (2010). Reunification from foster care: Informing measures over time. *Children and Youth Services Review, 32*(4), 475–481. doi:10.1016/j.childyouth.2009.09.013

Shaw, T. V. (2006). Reentry into the foster care system after reunification. *Children and Youth Services Review, 28*(11), 1375-1390. doi:10.1016/j.childyouth.2006.02.006

Shaw, T. V., & Webster, D. (2011). A Matter of Time: The Importance of Tracking Reentry Into Foster Care Beyond One Year After Reunification. *Journal of Public Child Welfare*, *5*(5), 501-520. doi:10.1080/15548732.2011.617262

Stahmer, A. C., Leslie, L. K., Hurlburt, M., Barth, R. P., Webb, M. B., Landsverk, J., & Zhang, J. (2005). Developmental and behavioral needs and service use for young children in child welfare. *Pediatrics*, *116*(4), 891-900. doi:10.1542/peds.2004-2135

Stayman, D. M. & Deshpande, R. (1989). Situational ethnicity and consumer behavior. *Journal of Consumer Behavior*, *16*(3), 361-371. Retrieved from http://www.jstor.org.ezp3.lib.umn.edu/stable/2489517

Stein, E., Evans, B., Mazumdar, R., & Rae-Grant, N. (1996). The mental health of children in foster care: A comparison with com- munity and clinical samples. *Canadian Journal of Psychiatry,* 41, 385–391. Retrieved from https://ww1.cpa-apc.org/Publications/Archives/PDF/1996/Aug/stein.pdf

Sullivan, T. J. (2001). *Methods of social research*. Fort Worth: Harcourt College Publishers.

Sztompka, P. (1974). S*ystem and function: Toward a theory of Society.* New York: Academic Press.

U.S. Department of Health and Human Services (2015). What is mental health? Retrieved from http://www.mentalhealth.gov/basics/what-is-mental-health/

U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2013b). *Child welfare outcomes 2008 – 2011: Report to congress.* Available from https://www.acf.hhs.gov/sites/default/files/cb/cwo08_11.pdf

U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2013a). *Child maltreatment 2012*. Available from http://www.acf.hhs.gov/programs/cb/research-data-

U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2014). *Trends in foster care and adoption (FFY 2002-FFY 2013).* Retrieved from http://www.acf.hhs.gov/sites/default/files/cb/trends_fostercare_adoption2013.pdf

U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2013). *Child maltreatment 2012*. Available from http://www.acf.hhs.gov/programs/cb/research-data-technology/statistics-research/child-maltreatment

U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2013b). *Child welfare outcomes 2008 – 2011: Report to congress.* Available from https://www.acf.hhs.gov/sites/default/files/cb/cwo08_11.pdf

U.S. Department of Health and Human Services Administration on Children Youth and Families. (n.d.). *Child welfare outcomes 2002–2005, report to Congress*. Retrieved from http://www.acf.hhs.gov/programs/cb/pubs/cwo05/index.htm

Webster, D., Shlonsky, A., Shaw, T., & Brookhart, M. A. (2005). The ties that bind II: Reunification for siblings in out-of-home care using a statistical technique for examining non-independent observations. *Children and Youth Services Review, 27*(7), 765-782. doi:10.1016/j.childyouth.2004.12.016

Wells, K., & Guo, S. (1999). Reunification and reentry of foster children. *Children and Youth Services Review, 21*, 273-294. doi:10.1016/S0190-7409(99)00021-3

Wells, K., & Shafran, R. (2004). Obstacles to employment among mothers of children in foster care. Child Welfare, 84, 67-96.

White Hawk, S. (2014, September 29). *We are coming home*. Retrieved from http://www.wearecominghome.com/ComingHome.php

Wilkinson, L., & Task Force on Statistical Inference, APA Board of Scientific Affairs (1999). Statistical methods in psychology journals: Guidelines and explanations. *American Psychologist, 54*, 594-604. doi:10.1037/0003-066X.54.8.594

Wulczyn, F. (2004). Family reunification. *The Future of Children, 14*, 95-113. Retrieved from http://www.jstor.org.ezp3.lib.umn.edu/stable/1602756