Children and Youth Services Review 64 (2016) 155–165

Contents lists available at ScienceDirect

Children and Youth Services Review

journal homepage: www.elsevier.com/locate/childyouth

Youth with disabilities in the United States Child Welfare System

Elspeth Slayter

School of Social Work, Salem State University, 352 Lafayette Street, Salem, MA 01970, United States

ARTICLE INFO

Article history:
Received 5 January 2016
Received in revised form 14 March 2016
Accepted 14 March 2016
Available online 17 March 2016

Keywords:
Child welfare
Child protection
Foster care
Disparities
Family well-being

ABSTRACT

Existing literature suggests that youth with disabilities are known to be at increased risk of maltreatment in the form of abuse and/or neglect. Little is known, however, about the experiences of youth with disabilities who are living in foster care or who are supervised by child protection authorities. This study establishes a baseline estimate of the prevalence of youth with disabilities living in foster care, documents reasons for child protection system involvement, identifies placement types while youth are in care and explores case outcomes. This cross-sectional, exploratory study draws on data from the 2012 Adoption and Foster Care Reporting System (AFCARS) for foster youth in 50 states, the District of Columbia and Puerto Rico. A sample of youth with disabilities ($N = 36.492$) and a comparison group without disabilities ($N = 601.539$) were identified. Findings about demographics, reasons for child removal, foster care placements, permanency planning goals and case outcomes are presented. Findings have implications for the prevention the removal of youth from caregivers, the need for family supports to prevent foster care involvement, the promotion of community inclusion of foster youth while in foster care and the need for inter-system collaboration at the transitional age stage.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

Youth with various disabilities are known to be at increased risk of maltreatment in the form of abuse or neglect (Hughes & Rycus, 1998; Jonson-Reid, Drake, Kim, Porterfield, & Han, 2004; Smith, 2002; Sobsey, 1994; Sullivan & Knutson, 2000; Vig & Kaminer, 2002; Westat, Inc., 1993). Once maltreatment is substantiated by child welfare officials, youth may be placed in the child welfare system or may remain with their families under child welfare supervision.

National data reporting on the reasons why youth with disabilities have come to the attention of child welfare authorities are also limited (Lightfoot, Hill, LaLiberte, 2011; Slayter & Springer, 2011). Existing research suggests that youth with disabilities are most likely to experience neglect (Sullivan & Knutson, 2000), physical neglect, medical neglect, with one study identifying a twofold increase in the likelihood of experiencing emotional neglect (Crosse, Kaye, & Ratnofsky, 1992). Further, Crosse, et al. found that youth with disabilities were more likely to experience physical abuse, sexual abuse and emotional abuse than their counterparts without disabilities. This finding was supported by Sullivan and Knutson's (2000) work on a sample of youth from the BoysTown program, which suggested higher likelihoods of physical abuse, sexual abuse and emotional abuse.

Despite this knowledge, national population-based estimates do not exist for youth with disabilities who are involved with the child welfare system — nor does the field have information about these youths' child welfare placements, permanency planning goals or case outcomes (Weaver, Keller & Loyek, 2006). A series of localized studies have examined the prevalence of youth with disabilities in the child welfare system, using different disability definitions.

In 1990, a study of thirty-three state child welfare agencies reported that 20% of youth in foster care had a range of disabilities as identified by the agency (Hill, Hayden, Lakin, Menke, & Amado, 1990). In 1991, Westat produced an evaluation of Title IV-E Foster Care Independent Living and found that 47% of youth aging out of care was “handicapped.” In 1992, an Illinois-based study reported identifying 29% of the school-aged population in foster care receiving special education services (Goerge, Voorhis, Grant, Casey, & Robinson, 1992). Also in 1992, Crosse et al. (1992) conducted research with 35 child welfare agencies and determined that 14% of foster youth had a suspected or diagnosed disability as defined by the agency. In 2000, a population-based study of students in one city revealed that 22% of all maltreated youth had a disability (Sullivan & Knutson, 2000). In a study of 13 to 21 year old foster children in a large urban school district in Oregon, 44% were found to receive special education services (Geenen & Powers, 2006). In 2007, a meta-analysis found that youth in foster care were disproportionally represented in the special education rolls (Scherr, 2007) at a rate of between 27 and 35%. Finally, in a Minnesota-based study, the prevalence of disability (measured as receipt of special education services) among child welfare-involved youth suggested that 22% of youth aged 0–18 had a disability, and when considering only those aged 5 through 18, 28% were found to have a disability (Lightfoot, Hill & Laliberte, 2011). Taken together, these data suggest that the prevalence of disability among child welfare-involved youth ranges from 14 to 47% of the population.

E-mail address: eslayter@salemstate.edu.

http://dx.doi.org/10.1016/j.childyouth.2016.03.012
0190-7409/© 2016 Elsevier Ltd. All rights reserved.

2. Experience in the child welfare system

Data on the experience of youth with disabilities in the child welfare system are also limited with respect to information about the nature of permanency goals (Bonner, Crow, & Hensley, 1997; Slayter & Springer, 2011). Every youth involved in the child welfare system has a permanency planning goal per the Adoption and Safe Families Act of 1997. When a youth first becomes known to child welfare workers, the first focus is on "supporting and stabilizing a family to prevent an initial placement" if at all possible (Children's Bureau, 2015). Ideally, family reunification is a preferred outcome for those in foster care. In situations in which youth are removed from their families for safety reasons, permanency planning efforts focus on the ideal of sending them home or placing them with another permanent family such as relatives, adoptive families who have obtained legal custody, or guardians. According to the Children's Bureau, "permanency planning involves decisive, time-limited, goal-oriented activities to maintain children within their families of origin or place them with other permanent families" (Children's Bureau, 2015). Several studies have explored permanency-related data, finding that youth with disabilities are less likely to achieve family reunification (Snowden, Leon, & Sieracki, 2008; Courtney & Wong, 1996; Akin, 2011) and more likely to be adopted (Akin, 2011). Existing research suggests there is a higher likelihood of out-of-home placement for youth with disabilities (between OR = 1.87–2.16 depending on age range (Lightfoot, Hill & LaLiberte, 2011). The present study will report on permanency-related data elements for a national sample of youth with disabilities in the child welfare system.

Very little information is available about patterns of child welfare placements or case outcomes for youth with disabilities (Bonner et al., 1997; Slayter & Springer, 2011). The National Council on Disability (2008) found that youth with disabilities are more likely to experience placement in congregate care settings versus family foster care settings. In a study focused on the nature of placements for older foster youth with disabilities, data suggest that this population was more likely to be placed in specialized settings and less likely to be placed in kinship care or non-relative foster placements — with the same findings heightened for youth with developmental disabilities (Schmidt et al., 2013). Further, these youths' characterizations of the restrictiveness of their placements suggested that youth with disabilities reported higher rates of restrictiveness of communication, movement restrictiveness and access to the community. Another statewide study focused on youth aged 17+ found that youth with disabilities experienced "higher rates of placement instability and longer stays in placement," suggesting that they are "at higher risk for emotional, educational, mental health, and behavioral problems" (Hill, 2012, 1422). In order to build on these data, the present study will report on placement and outcome data elements among a national sample of youth with disabilities in the child welfare system.

3. Implications of child welfare involvement

Understanding more about how maltreatment and child welfare involvement may impact the lives of youth with disabilities in a national sample is vital given the trauma youth may have experienced due to maltreatment, investigation of that maltreatment and/or their removal from families. These potential traumas, coupled with the impact of living as a foster youth, can be detrimental in both the short and long-term (Strickler, 2001; Weaver, Keller & Loyek, 2006). A lack of a sense of belonging, disrupted family identity, attachment disorders, emotional distress and the stigma of being a foster youth are all documented risk factors for foster youth in general (Barahal, Waterman, & Martin, 1981; Mallon & McCartt Hess, 2006). Research also suggests that youth who grow up in or spend extended periods of time living in foster care are less likely to establish the personal and lifelong connections that will guide them into adulthood upon "aging out" of foster care at circa age eighteen (Renne & Mallon, 2005). These negative experiences may work together to create cumulative risk for negative outcomes including mental illness, lower levels of education and limited employment (Pecora, O'Brien, & Hiripi, 2007).

Given that youth with disabilities are at risk for all of the same types of risk factors for child abuse and neglect that youth without disabilities may face. It is possible that foster youth with disabilities are especially vulnerable to the potential socioeconomic and psychological stressors associated with foster care and that these stressors may impede community inclusion. Foster placement instability (i.e. a situation in which foster youth are moved from foster home to foster home for clinical or administrative reasons), a noted concern for all foster youth, is an especially important factor to consider as it relates to the quality of life of foster youth with disabilities. Placement instability can negatively impact the receipt of school-based services under an Individual Education Plan (D'Andrade, 2005; Schormans, Coniega, & Renwick, 2006; Geenen & Powers, 2006).

4. Federal policies addressing disability and child protection

A series of Federal legislative efforts have addressed youth with disabilities who are either at risk of child welfare involvement or who are living in foster care (Slayter & Springer, 2011). The passage of Children's Justice and Assistance Act of 1986 had ramifications for youth with disabilities. In general, this act was focused on addressing the handling of child abuse cases so as to limit additional trauma to the child victim; the investigation and prosecution of child abuse cases. For states to qualify for financial assistance under this act, they needed to establish interdisciplinary task force on children's justice and adopt the recommendations of that task force in three programmatic areas, one of which led to supports for youth with disabilities. Specifically, they needed to consider recommendations related to experimental, model, and demonstration programs for testing innovative approaches and techniques for enhancing the effectiveness of judicial or administrative action in child abuse cases. Also in 1986, the passage of the Temporary Child Care for Handicapped Children and Crisis Nurseries Act led to the availability of financial support for targeted respite services for the families of youth with intellectual disabilities.

In 1988, the passage of the Child Abuse Prevention, Adoption and Family Services Act of 1988 focused attention on foster youth with 'special needs' (Rosenthal, Groze, & Aguilar, 1991). In this act, 'special needs' were defined in the context of situations in which it was reasonable to conclude that a youth could be placed with adoptive parents without financial assistance in the form of adoption subsidies and/or medical assistance. Specifically, special needs could include ethnic background, age and membership in a sibling group. Additionally, the term could also apply to a youth with a medical condition or a physical, mental or emotional disability. While this act was not specific to youth with disabilities, it did include the provision for services that could support this specific population of foster youth.

5. Study aims

Despite the aforementioned Federal-level policy attention given to foster youth with disabilities and existing knowledge about increased risk factors for child abuse and/or neglect, a study of national data on the topic is warranted (Lightfoot, Hill & LaLiberte, 2011; Lightfoot, 2014). This purpose of this exploratory, cross-sectional study is to establish baseline national information about the prevalence and experiences of youth with disabilities involved in the child welfare system in 2012. The present study will build on the existing research through the use of the Adoption and Foster Care Reporting System (AFCARS) which has been strengthened by the guidance provided in the 2010 reauthorization of the Child Abuse Prevention and Treatment Act (CAPTA, P.L. 111–320). Given that no national population-based studies on the larger community of youth with and without disabilities in the child welfare system exist, seven exploratory research questions guide this study. First, what is the prevalence of youth with disabilities in the child welfare system? Second, what is the rate of previous child welfare involvement among youth with disabilities in the child welfare system, i.e. did they experience adoption disruption? Third, what was the most common manner of removal that youth with disabilities experienced in their most recent child welfare episode? Fourth, what are the reasons youth with disabilities were removed from their families or caregivers? Fifth, what types of placement settings did youth with disabilities live in? Sixth, what are the permanency planning goals of youth with disabilities? Seventh, what were the child welfare case outcomes of youth with disabilities aged 0–17 and 18 plus?

6. Methods

6.1. Data source

This cross-sectional, exploratory study analyzed secondary data from the Adoption and Foster Care Reporting System (AFCARS) for foster youth in 50 states, the District of Columbia and Puerto Rico. AFCARS includes case level data entered by child welfare workers on all foster youth in the custody of state child protective services either via institutional placement, family foster care or supervision. AFCARS was developed to collect uniform, reliable information on youth who are under the responsibility of the child welfare system for placement, care, or supervision. The collection of AFCARS data is mandated by Section 479 of the Social Security Act. According to the Children's Bureau, “the requirements for AFCARS are codified in Federal regulation at 45 CFR 1355.40” (Children's Bureau, 2009: 1). Further:

> “AFCARS was established to provide data that would assist in policy development and program management. Data can be used by policymakers at the Federal, Tribal, and State levels to assess the reasons why children are in foster care and to develop strategies to prevent their unnecessary placement into foster care. Specifically, the data include information about foster care placements, adoptive parents, and length of time in foster care, and make it possible to identify trends in particular geographic areas.”
>
> [Children's Bureau (2009: 1)]

When relying on administrative data, a type of data source derived for administrative versus research purposes, construct validity and reliability may be limited. While the potential challenges to the validity and reliability of the variables in the AFCARS data file are noted to include state by state differences in reporting and the validity of diagnostic conditions (as discussed below in the present study's Methods section), a number of national efforts were initiated to address this concern (Slayter & Springer, 2011). Efforts to improve the data file's reliability and validity were supported through financial support for improvements to each state's Statewide Automated Child Welfare Information Systems (SACWIS) (Government Accounting Office, 2003). In 2009, the Children's Bureau developed the AFCARS Assessment Review process, which targets the improvement of these data (Children's Bureau, 2009) as follows:

> “The Children's Bureau created the AFCARS Assessment Review process to ensure the accuracy and reliability of the foster care and adoption data. During these reviews, the Federal review team assesses the efficiency and effectiveness of a title IV-E agency's data collection, extraction, and reporting processes, and provides intensive technical assistance to title IV-E agency staff responsible for those processes.”
>
> [ACF, Administration for Children and Families (2012)]

Documentation provided by the ACF states that “the AFCARS data submissions are subject to a minimal number of edit checks, as listed in Appendix E of 45 CFR 1355. These edit checks are able to determine substantial compliance only for the timely submission of the data files; the timeliness of data entry of certain data elements; and whether the data meets a 90% level of tolerance for missing data and internal consistency” (ACF, Administration for Children and Families, 2012). Further, the Assessment Review guidance document indicates that “these edit checks are an important first step to ensuring the collection of quality data…there may still be a need to improve its AFCARS data for accuracy, reliability, and validity. The edit checks are not able to determine whether …an agency is submitting accurate and reliable data to the Children's Bureau that meet all of the AFCARS requirements” (ACF, Administration for Children and Families, 2012) The results of the AFCARS Assessment Review process do not appear to be publically available data. Given the above, a statement about the general reliability and validity of data collected in AFCARS is impossible to make.

6.2. Sample and participant selection

The study draws on AFCARS data about all youth aged 0+ in the child welfare system in 2012, to find a sample of youth with disabilities and a comparison group without disabilities (Cornell University Family Life Development Center, 2012). Youth with a diagnosed disability constituted 26.3% of the population ($n = 167.594$). Youth for whom a disability had not yet been diagnosed, but was suspected, constituted 11.1% of the population ($n = 70.805$) leaving 56.4% of youth who did not have a diagnosed disability ($n = 359.890$). Youth without a confirmed disability diagnosis were excluded from this study. After this exclusion, youth with disabilities constituted 31.8% of the population.

Using a medical model approach to the definition of disability given the nature of the data source, youth included in the sample were categorized as having one of five conditions: intellectual disability, physical disability, visual or hearing disability, emotional disturbance or other medical condition. A composite disability variable was created from these variables. The use of this approach to the measurement of disability presents a problem regarding the ability to compare findings with existing studies that use special education and learning disability registry data in conjunction with child welfare data to develop population estimates and case findings (Geenen & Powers, 2006). Additionally, the present study's approach may result in an undercount of youth with disabilities given that special education systems may have broader definitions of disability.

In AFCARS, the notation of having one of a set of diagnoses originally occurs when the child welfare caseworker makes such a note in her/his state's case management data system. This notation is supposed to be made once documentation of the condition is obtained from a medical doctor or other appropriate source (e.g. an Individual Education Plan or neurological report, for example), thus establishing a measure of reliability (ACF, Administration for Children and Families, 2007). However, existing literature suggests that child welfare caseworkers are not necessarily trained to identify the presence of a disability Lightfoot, Hill & LaLiberte, 2011). A description of the diagnoses included in each disability definition is provided below.

First, intellectual disability is defined in AFCARS as a clinical diagnosis of “mental retardation,” which was defined as “significantly subaverage general cognitive and motor functioning existing concurrently with deficits in adaptive behavior manifested during the developmental period that adversely affect a youth's socialization and learning” (AFCARS, 2007, 5). Further, AFCARS included youth in the “mental retardation” category if they had a clinically validated diagnosis of Down Syndrome, Borderline Intellectual Functioning, Hydrocephalus, Microcephaly, or Mental Retardation (mild, moderate, severe, profound), although individual counts of these conditions were not accessible (ACF, Administration for Children and Families, 2007, 5).

Second, AFCARS operationalizes physical disability as a situation in which a youth has “a physical condition that adversely affects the youth's day-to-day motor functioning, such as cerebral palsy, spina bifida, multiple sclerosis, orthopedic impairments, and other physical disabilities” (ACF, Administration for Children and Families, 2007, 5).

Third, AFCARS groups visual and hearing impairments together, and operationalizes them as “having a visual impairment that may significantly affect educational performance or development; or a hearing impairment, whether permanent or fluctuating, that adversely affects educational performance” (ACF, Administration for Children and Families, 2007, 5). In the present study, the term “visual and hearing disabilities” is used.

Fourth, AFCARS includes a variable for emotional disturbance which is categorized as “a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree: An inability to build or maintain satisfactory interpersonal relationships; inappropriate types of behavior or feelings under normal circumstances; a general pervasive mood of unhappiness or depression; or a tendency to develop physical symptoms or fears associated with personal problems. The term includes persons who are schizophrenic or autistic. The term does not include persons who are socially maladjusted, unless it is determined that they are also seriously emotionally disturbed (AFCARS, 2007, 5–6). Finally, AFCARS includes a variable for “other medically diagnosed condition requiring special care” which is operationalized as “conditions other than those noted above which require special medical care such as chronic illnesses. Included are children diagnosed as HIV positive or with AIDS” (AFCARS, 2007, 6).

6.3. Measures

Other than the composite disability variable described above, all other variables in this study were derived from the original measures developed by the AFCARS, which can be viewed in the AFCARS codebook (see: http://www.acf.hhs.gov/sites/default/files/cb/afcars_tb1.pdf). Demographic characteristics such as age, gender, race and Hispanic/Latino/a ethnicity were included in the analysis (ACF, Administration for Children and Families, 2007; AFCARS, 2007). Foster care case characteristics included two groupings of variables: history of child welfare involvement and placement settings. I have re-named some of the AFCARS variables for the sake of clarity, as follows. First, variables measuring history of child welfare involvement included lifetime number of removals (“total number of removals”), age at first removal episode, years since the current removal episode (derived from “length (days) since latest removal”), years since a “termination of parental rights” petition was finalized (derived from “date of the mother's termination of parental rights”) and history of any previous adoptions (“child ever adopted”). Reasons for the current removal episode were assessed (non-mutually exclusive categories) along with most recent removal manner (that is, whether it was voluntary or court-ordered, from “removal manner”).

Second, variables measuring the foster care placement setting of youth were included along with those that described the placement type as of the report date. These variables were derived from the “current placement setting” variable in AFCARS and include “pre-adoptive home,” “foster home, relative,” “foster home, non-relative,” “group home,” “institution,” “supervised independent living,” “runaway,” and “trial home visit.” Additionally, the number of placement settings during the youth's current removal episode was also reported (from “number of placement settings during current foster care episode”). Variables measuring the permanency plan goals and foster care case outcomes of youth living in foster care included eight types. The language of permanency planning goals and case outcomes are the same, although a youth could, for example, have had guardianship as a permanency planning goal but emancipation as a case outcome. Permanency planning goal types included “reunify with parent, principal caretaker,” “live with other relative(s),” “adoption,” “long-term foster care” “emancipation,” “guardianship,” or “case plan goal not yet established.”

Youth either remained in foster care at the end of 2012, or were discharged. The first discharge type is framed here as family reunification (from “reunified with parent, primary caretaker), in which a youth returns to the parent or primary caretaker from whom they were removed or who voluntarily put them in foster care. The second discharge type involved a youth being discharged to a situation in which they were living with other relatives. The third discharge type was adoption, in which a youth is adopted from the child welfare system. The fourth type of discharge was emancipation, in which a youth is emancipated to their own custody either at age 18 or via a legal emancipation process at an earlier age. The fifth type of discharge involved being released to a legal guardian — which might or might not involve a family member (from “guardianship”). The sixth type of discharge involved a transfer from the child welfare authority to another state agency, such as a Department of Developmental Services. The seventh and eighth types of discharge involved a situation in which the youth was noted to have run away or died (from “death of child”).

6.4. Statistics and data analysis

Univariate and bivariate analyses were included in the present study. These included independent samples t-tests and both unadjusted and adjusted odds ratios derived from logistic regression. Age and gender-adjusting were used in odds ratio calculations given existing knowledge about the impact of age and/or gender on child welfare-related characteristics (Guterman & Taylor, 2005; Sobsey, Randall, & Parilla, 1997). For example, research suggests that older youth and boys are less likely to be placed in home-based placements as opposed to institutional placements and/or discharged to a permanent living situation (such as adoption or guardianship) (Guterman & Taylor, 2005; Sobsey et al., 1997). Given the large size of the AFCARS data set, odds ratios are reported as a standard measure of effect (Haddock, Rinsdkopf, & Shadish, 1998). As Chen, Cohen, and Chen (2010) note, “the odds ratio (OR) is probably the most widely used index of effect size in epidemiological studies” (p. 860). Further, these authors suggest that odds ratios of 1.68, 3.47, and 6.71 are equivalent to Cohen's d effect sizes of 0.2 (small), 0.5 (medium), and 0.8 (large), respectively” (p. 860). Also, as Haddock et al. (1998) state “there is widespread consensus among statisticians that…the most appropriate measure of effect size from a four-fold table is the odds ratio. (p. 340).” Therefore, both absolute and relative measures of effect are reported in this manuscript.

6.5. Findings

Results are reported according to the chronology of the specific phases of child welfare system involvement. Youth with disabilities constituted 31.8% of the entire foster care population aged 0+ represented in AFCARS. In order to compare findings with existing population-based research by Lightfoot, Hill and LaLiberte (2011), two other analyses were conducted to determine that 31.1% of youth in the child welfare system aged 0–18 had a disability and 37.8% of youth in the child welfare system aged 5–18 had a disability. Youth with disabilities were on average 4 years older than their counterparts and very slightly more likely to be male. Results related to race and ethnicity suggest only minor differences between most groups, although youth with disabilities were 27% less likely to be categorized as Caucasian. See Table 1.

6.6. History of child welfare involvement and removal manner

Foster youth with disabilities were more likely to have been adopted previously (4.70% vs. 1.90%, OR = 2.62, $p < 0.001$), suggesting a proxy measure for previous child welfare involvement. Whether or not youth have had prior involvement with child welfare systems, the manner in which a youth is removed from their family as a result of suspected abuse or neglect may be an indicator of the potential severity of the trauma experienced. A majority of both youth with and without disabilities were placed with child welfare as a result of a court order during their most recent or current removal episode. While overall rates of voluntary (versus court-ordered) placement in foster care

Table 1
Demographic and health characteristics of foster youth by disability status.

Variable	Youth without disabilities ($n = 360.717$) percentage	Youth with disabilities ($n = 166.767$) percentage	Odds ratio or t-test	Confidence intervals
Mean age	7.67 (5.78)	11.0 (5.72)	$t = 200.31^{***}$	n/a
Female	49.9%	43.9%	0.78***	0.77–0.79
African American/Black	31.0%	32.3%	1.06***	1.04–1.07
American Indian/Alaskan Native	4.50%	4.00%	0.89***	0.86–0.92
Asian/Pacific Islander	1.70%	1.70%	–	–
Caucasian	64.7%	57.4%	0.73***	0.72–0.74
Hispanic/Latino/a	19.0%	23.1%	1.27***	1.26–1.29

Note: foster youth without disabilities are the referents.
– indicates a finding that is not statistically significant.
*** $p < 0.001$.
** $p < 0.01$.
* $p < .05$.

were <5%, youth with disabilities were slightly more likely to have experienced this pathway into the child welfare system (4.8% vs. 3.0%, OR $= 1.63$, $p < 0.001$). 90.9% of youth with disabilities were removed via a court order, at slightly less than youth without disabilities (94.1%, OR $= 0.62$, $p < 0.01$).

6.7. Removal-related characteristics and comparisons

The reasons for which youth with disabilities became involved in the child welfare system are detailed in Table 2. Neglect emerged as the primary reason that youth were removed, at 58.1% among youth with disabilities vs. 60.1% among the members of the comparison group, youth without disabilities. Following neglect, parental drug abuse, ‘parental inability to cope’ was the second most common reason for removal, at 22.9% among youth with disabilities vs. 16.9% among the comparison group. This was defined as a situation in which a parent had a “physical or emotional illness or disabling condition adversely affecting the caretaker's ability to care for the child” (AFCARS, 2007). The third most common removal reason was ‘child's behavior,’ at 21.2% among youth with disabilities vs. 9.40% among the comparison group. The fourth most common removal reason was parental drug abuse, at 20.1% among youth with disabilities and 30.9% among the comparison group. The fifth most common removal reason for removal was physical abuse, at 15.3% of youth with disabilities and 14.9% among the comparison group. This pattern differed slightly from the order of the most common removal reasons among youth without disabilities, which was neglect, parental drug abuse, parental inability to cope, physical abuse and inadequate housing.

Our adjusted odds ratio results also suggested reasons for removal that may be less common among youth with disabilities; these types included parental alcohol abuse (17% less likely), parental drug abuse (28% less likely), a parent's death (47% less likely), a parent's incarceration (27% less likely), abandonment (15% less likely) and inadequate housing (7% less likely). Youth with disabilities were only very slightly more likely than youth without disabilities to be removed due to child's alcohol abuse (OR $= 1.31$), child's drug abuse (OR $= 1.74$), child's behavior (OR $= 1.42$) and parental inability to cope (OR $= 1.46$). Removal due to physical abuse, neglect, relinquishment and sexual abuse were equally likely between groups.

6.8. Placement-related characteristics and comparisons

Once youth with disabilities enter into foster care, their placement setting can have a significant impact on their well-being during a time of potentially traumatic transition from their regular schedules, habits and circles of support. Generally, placement decisions are to be based on the least restrictive setting possible that will meet a child's safety needs, promote placement stability (i.e. the least amount of moving between foster homes and institutional settings as possible) and support possible family reunification (Adoption and Safe Families Act of 1997).

Despite these foster care policy goals, foster youth with disabilities experienced more placement instability (measured as number of settings in which the youth resided during the current foster care episode) than their counterparts (4.14 (SD $= 4.71$) placements vs. 2.45 (SD $= 2.71$) placements, $t = -164.6$, $p < 0.001$).

Table 2
Removal-related characteristics of foster youth with and without disabilities†.

Variable	Youth without disabilities ($n = 360.717$) percentage	Youth with disabilities ($n = 166.767$) percentage	Unadjusted odds ratios	Adjusted odds ratios	Confidence intervals
Physical abuse	14.9	15.3	1.02***	1.07***	1.05–1.09
Sexual abuse	4.60	5.70	1.23***	–	–
Neglect	60.1	58.1	0.92***	1.18***	1.15–1.19
Parental Alcohol abuse	7.50	6.10	0.80***	0.83***	0.80–0.84
Parental drug abuse	30.9	20.1	0.56***	0.73***	0.72–0.74
Child's alcohol abuse	0.70	1.30	1.89***	1.31***	1.23–1.40
Child's drug Abuse	1.90	3.90	2.12***	1.74***	1.68–1.80
Child's Behavior	9.40	21.2	2.59***	1.42***	1.39–1.45
Parent's death	1.80	1.20	0.68***	0.53***	0.50–0.55
Parent's incarceration	8.10	5.50	0.66***	0.73***	0.71–0.74
Inability to cope	16.9	22.9	1.45***	1.46***	1.41–1.45
Abandonment	5.10	5.30	1.05***	0.85***	0.83–0.88
Relinquishment	1.00	1.40	1.42***	1.15***	1.08–1.21
Inadequate housing	12.2	10.3	0.83***	0.93***	0.91–0.95

Note: Adjusted odds ratios are age and gender-adjusted with foster youth without disabilities as referents. †Reasons for removal are not mutually exclusive; – indicates a finding that is not statistically significant.
*** $p < 0.001$.
** $p < 0.01$.
* $p < 0.05$.

Details about the placements of youth with and without disabilities are presented in Table 3. A majority of youth with disabilities were placed in non-kinship foster family homes, which mirrored the experience of youth without disabilities. Most important to note is the fact that the ideal goal for most foster youth is family reunification, yet youth with disabilities were 37% less likely to be placed with family in a trial home visit (and this was the sixth most common placement type vs. the third most common type among the comparison group). While kinship foster care is often regarded as the best alternative home for all youth in the child welfare system, youth with disabilities were 40% less likely to live in this type of setting.

Conversely, youth with disabilities were slightly more likely to be living in a non-kinship foster family setting or 1.75 times more likely to be in a pre-adoptive foster home, although due to limitations in the AFCARS data, it is unclear whether or not a pre-adoptive home could consist of kin. This suggests that the ideal goals for foster youth involving the maintenance of contact with kin may be more likely not to be a reality for foster youth with disabilities.

With respect to congregate care settings, youth with disabilities were 2.47 times more likely to live in an institution (adjusted odds ratios brought this down to 1.41 times more likely) and were 2.22 times more likely to live in community-based group homes (adjusted odds ratios brought this down to 1.28 times more likely), which raises questions about whether goals of community inclusion for youth with disabilities are highlighted as important in the child welfare system. Although a small percentage of youth with disabilities were reported to be living independently, they were 10% less likely to live in this type of placement than were their counterparts.

6.9. Permanency planning goals

A majority of youth with disabilities had reunification with a parent as their goal, followed by adoption, emancipation, long-term foster care, discharge to guardianship and reunification with another family member. Although the top goal for youth with/without disabilities is reunification, foster youth with disabilities had this as their goal at a much lower rate (39.9% vs. 54.3%) which translated into being 39% less likely to have this placement after adjusting for age and gender. Youth with disabilities were twice as likely to have long-term foster care as their goal, followed by adoption, emancipation, and guardianship. See Table 4.

6.10. Foster care outcomes for youth aged 0–17

Across the nation, foster youth with disabilities aged 0–17 comprised 32.7% of the foster youth in this age range ($n = 166.629$). Among foster youth who were in the child welfare system in 2012, 64.1% remained in foster care at the end of the year while the remaining 35.9% were discharged. Foster youth with disability were 12% less likely to exit foster care as compared to their counterparts without a disability (OR = 0.88, $p < 0.001$). Among all of the foster youth who remained in the child welfare system, 19.3% were the subject of what are referred to as "terminations of parental rights" cases — and were technically free to be adopted or otherwise placed. There was a higher rate of completed terminations of parental rights cases among youth with disabilities (25.0%) compared to those without disabilities (14.5%); youth with disabilities were two times more likely to be the subject child on a termination of parental rights case (OR = 2.02, p < 001).

Results related to the foster care outcomes for youth with and without disabilities are presented in Table 5. The top five foster care outcomes for youth with disabilities were reunification with parent, adoption, discharge to guardianship, living with another relative and transfer to another agency. Adjusted odds ratios results suggest that youth with disabilities in this age group were more likely to die (OR = 2.79), be adopted (OR = 2.15), be emancipated (OR = 1.68) and slightly more likely to be transferred to another agency (OR = 1.23). For youth who were adopted, on average, foster youth with disabilities waited 2.33 (SD = 3.01) years between the termination of their parents' rights and their adoption — compared to 1.19 (SD = 1.51) year for their counterparts ($t = -56.17$, $p < 0.001$). 3.9% of foster youth with a disability who were adopted out of the child welfare system received Title IV-E Adoption Assistance funds as compared to 6.7% of the comparison group. Youth with disabilities in this age range were less likely to be living with another relative (40% less likely), reunified with a parent (34% less likely), discharged to guardianship (21% less likely) and to be categorized as a runaway (9% less likely).

6.11. Foster care outcomes for transitional-aged youth

7.1% of all foster youth were aged 18 or higher ($n = 37.523$) — youth with disabilities comprised 52.7% of these youth ($n = 19.785$). These youth are part of the transitional-aged population who are undergoing what Jeffrey Arnett (Arnett, 2000) refers to as the 'emerging adulthood' developmental phase. Eighteen is the age at which youth must either "sign on" for additional foster care services or "sign out" of foster care as an adult. On average, these youth were 18 years old with no meaningful difference noted between groups by disability status. Although there were very small numbers of people over the age of 22 ($n = 18$), the bulk of people were aged 16–21. Results on foster care outcomes for transitional-aged youth with and without disabilities are presented in Table 6. The five most common foster care outcomes for this population were emancipation, reunification with a parent, transfer to another agency, being classified as a runaway and living with another relative. Youth with disabilities were 1.73 times more likely to be transferred from foster care into another state agency's custody, but were less likely to be living with another relative (39% less likely) or reunified with a parent (11% less likely). Youth with disabilities were equally likely to

Table 3
Placement-related characteristics of foster youth with and without disabilities.

Variable	Youth without disabilities ($n = 360.717$) percentage	Youth with disabilities ($n = 166.767$) percentage	Unadjusted odds ratios	Adjusted odds ratios	Confidence intervals
Trial home visit	12.3	7.90	0.61***	0.62***	0.60–0.63
Foster home, relative	29.2	16.8	0.48***	0.60***	0.59–0.61
Foster home, non relative	38.3	39.4	1.05***	1.18***	1.17–1.20
Pre-adoptive home†	8.20	10.0	1.23***	1.75***	1.71–1.79
Group home	4.10	8.60	2.22***	1.28***	1.25–1.31
Institution	5.50	12.6	2.47***	1.41***	1.38–1.44
Supervised independent living	1.00	2.00	2.10***	0.90***	0.86–0.95
Runaway	0.90	2.20	2.50***	1.28***	1.22–1.34

Note: adjusted odds ratios are age and gender-adjusted with foster youth without disabilities as referents. †Data limitations suggest that this type may not be mutually exclusive from kinship foster care.

*** $p < 0.001$

** $p < 0.01$.

* $p < 0.05$.

Table 4
Permanency planning goals of foster youth with and without disabilities.

Variable	Youth without disabilities ($n = 360.717$) percentage	Youth with disabilities ($n = 166.767$) percentage	Unadjusted odds ratios	Adjusted odds ratios	Confidence intervals
Reunification with parent, principal caretaker	54.5	39.9	0.55^{***}	0.61^{***}	0.60–0.62
Reunification with other relative(s)	3.40	3.10	0.92^{***}	0.76^{***}	0.74–0.79
Adoption	22.4	27.1	1.28^{***}	1.76^{***}	1.73–1.78
Long-term foster care	2.40	8.20	3.72^{***}	2.07^{***}	2.01–2.13
Emancipation	3.40	10.2	3.25^{***}	1.65^{***}	1.60–1.69
Guardianship	3.60	5.20	1.46^{***}	1.23^{***}	1.20–1.27

Note: Adjusted odds ratios are age and gender-adjusted with foster youth without disabilities as referents.

*** $p < 0.001$.

** $p < 0.01$.

* $p < .05$.

be adopted, emancipated, discharged to guardianship, classified as a runaway or to die.

7. Discussion

The data reported upon in this manuscript provide a helpful set of baseline information about the demographic and foster care-related characteristics of child welfare-involved youth with disabilities. The discussion of findings presented here mirrors the chronology of a given youth's child welfare involvement, starting with prevalence and demographic information moving on to removal reasons and permanency goals and ending with case outcomes.

Youth with disabilities constituted 31.8% of the child welfare population aged 0+, a finding that was within the range of prevalence rates previously established in the research (see Introduction section of the present study). When compared to the most comparable prevalence study that used population-based data in a state-specific study, the present study's findings were almost ten points higher than the 22% figure previously noted (Lightfoot, Hill & LaLiberte, 2011). This difference may relate to differences in measurement given that the present study may have included youth with disabilities who might not be identified as needing an Individual Education Plan (i.e. youth with physical disabilities who had no learning problems). Additionally, the present study's finding that 37.8% of youth in the child welfare system aged 5–18 had a disability is ten points higher than Lightfoot, Hill & LaLiberte's (2011) estimate of 27.9%.

That almost a third of youth in the child welfare system have one or more of a range of disabilities surely warrants greater attention to the training of the workforce vis-à-vis disability competency, such as an orientation to the social model of disability and/or the use of favored disability-related language (Lightfoot, 2014). The presence of youth with disabilities in child welfare systems raises baseline questions about the capacity of that system to care for these populations given documented "disconnects" between disability and child welfare systems (Lightfoot & LaLiberte, 2006; Slayter & Springer, 2011). Most immediately, concerns arise about whether foster care caseworkers and placements/providers are trained in disability competence as well as accessing and/or advocating for services within either the early intervention or school-based settings (Geenen & Powers, 2006). Local agencies could consider the designation of an office disability expert or team (Lightfoot, 2014). Foster care systems may also not have enough specialized and/or therapeutic foster homes available to support youth who may use, for example, sign language or facilitated communication.

7.1. Implications of racial and ethnic differences by disability status

Results related to the race and ethnicity of youth with and without disabilities suggests parity with roughly equal percentages in each racial and ethnic category — although youth with disabilities were 27% less likely to be categorized as Caucasian. This differs from existing research which suggests that this group has a higher likelihood of being Caucasian (Crosse et al., 1992; Lightfoot, Hill & LaLiberte, 2011; Schmidt et al., 2013). In the present study, 61.1% of youth with disabilities in the child welfare system were youth of color. An exploration of why youth with disabilities are less likely to be Caucasian would be important to explore in future research, especially given research that documents the over-diagnosis of African American/Black boys, for example, with intellectual disabilities. These findings differ from the findings of Lightfoot, Hill and LaLiberte, (2011) who found a higher percentage of Caucasian youth among those with disabilities. The present study's findings fit with existing knowledge about the presence of racial disproportionality in child welfare. Whether African-American/Black youth with disabilities, for example, are more likely to be tracked into child welfare system as a result of their race, their disability or the combined impact of the two warrants further exploration (McRoy, 2008).

7.2. Increased exposure to the influence of foster care

Our data suggest that youth with disabilities have had more years of child welfare contact (since their first removal episode) than have their counterparts. The impact of a series of intersecting, cumulative risk factors related both to disability, child welfare and/or foster care

Table 5
Foster care case outcomes for youth aged 0–17 with and without disabilities who exited the child welfare system.

Variable	Youth without disabilities ($n = 126.271$) percentage	Youth with disabilities ($n = 45.442$) percentage	Unadjusted odds ratio	Adjusted odds ratio	Confidence intervals
Reunified with parent, primary caretaker	55.8	48.2	0.73^{***}	0.66^{***}	0.64–0.67
Living with other relative(s)	9.60	5.90	0.59^{***}	0.60^{***}	0.57–0.62
Adoption	23.4	34.0	1.69^{***}	2.15^{***}	2.09–2.20
Emancipation	0.40	1.10	2.74^{***}	1.68^{***}	1.48–1.90
Guardianship	8.30	7.10	0.83^{***}	0.79^{***}	0.76–0.82
Transfer to another agency	1.30	2.20	1.66^{***}	1.23^{***}	1.13–1.33
Runaway	0.30	0.40	1.56^{***}	0.91^{***}	0.77–1.09
Death of child	0.10	0.30	2.46^{***}	2.79^{***}	2.19–3.55

Note: Adjusted odds ratios are age and gender-adjusted with foster youth without disabilities as referents.

*** $p < 0.001$.

** $p < 0.01$.

* $p < .05$.

Table 6
Foster care case outcomes for transitional aged youth aged 18+ with and without disabilities who exited the child welfare system.

Variable	Youth without disabilities ($n = 11.359$) percentage	Youth with disabilities ($n = 11.267$) percentage	Unadjusted odds ratio	Adjusted odds ratio	Confidence intervals
Reunified with parent, primary caretaker	11.0	9.90	0.88**	0.89**	0.82–0.97
Living with other relative(s)	1.70	1.10	0.62***	0.61***	0.49–0.77
Adoption	0.40	0.40	–	–	–
Emancipation	83.2	83.9	–	–	–
Guardianship	0.50	0.40	–	–	–
Transfer to another agency	1.30	2.30	1.81***	1.73***	1.40–2.12
Runaway	1.60	1.40	–	–	–
Death of child	0.01	0.10	–	–	–

Note: adjusted odds ratios are age and gender-adjusted with foster youth without disabilities as referents.
– indicates a finding that is not statistically significant.
*** $p < 0.001$.
** $p < 0.01$.
* $p < .05$.

involvement may cause youth with disabilities to be at higher risk for negative outcomes for several reasons which may include the trauma of entering foster care (once or repeatedly), living away from familiar circles of support and life patterns, the social stigma associated with living in foster care and the effects of documented challenges regarding collaboration between disability and child welfare agencies. Finally, that foster youth with disabilities were slightly older than their counterparts suggests that they may have more memory of life in foster care, suggesting the increased potential for the experience of trauma and/or stigma.

7.3. The trauma of adoption disruption

While only a small number of youth had previously been adopted from the child welfare system, our result that youth with disabilities were 2.6 times more likely to have experienced a disrupted adoption supports existing research (Festinger, 2005). Most of these youth were between the ages of 6–12 at the time of their previous adoption, a time that encompasses important developmental stages. Research related both to the reasons for and ramifications of adoption disruption for foster youth with disabilities needs to be conducted. While adoption disruption can result from a variety of potentially interrelated causes ranging from “a poor fit” to a change in the adoptive family's circumstances, it may have an especially problematic and disproportionate impact on youth with disabilities with respect to their ability to form healthy attachments with their future caretakers (Festinger, 2005). Previously adopted foster youth with disabilities may be at increased risk of poor outcomes both in foster care and in more permanent long-term placements. Efforts to prevent adoption disruption, including the role of adoption subsidies, must be considered perhaps in part by exploring the factors associated with youth who are adopted out of the foster care system.

7.4. Reasons for removal

Results related to the reasons why youth with disabilities were removed from their families mirror standard prevalence estimates for the basic types of child maltreatment (i.e. abuse and neglect). For example, a majority of child welfare cases tend to be categorized as “neglect” (61% of cases in 2004) and “physical abuse” (19% in 2004) (Guterman & Taylor, 2005). In our examination of the reasons that youth were removed from their families, youth with disabilities were only very slightly more likely to be removed as a result of parental neglect, also the most common reason for removal in the comparison group (Van Ijzendoorn, Rutgers, Bakermans-Kranenburg, et al. 2007). The same was true for physical abuse (OR = 1.07) although rates were statistically equal between groups on sexual abuse. This finding differs from existing research which suggests increased rates of physical and sexual abuse for the sample.

While youth with disabilities were only 1.46 times more likely to be removed due to their parents' “inability to cope,” this was the second most common reason for removal in the sample. Further research in the form of a detailed case record review targeting families or caregivers whose youth with disabilities were removed due to neglect or physical abuse might reveal whether disability support services had been in place and where those services might be lacking. Existing literature on coping with a non-normative parenting challenge suggests the potential for increased rates of depression and/or the need for respite care, for example, both of which could likely play a role in preventing child maltreatment and entry into child welfare systems (Slayter & Springer, 2011). Given that this is known, an examination of the ways in which existing family supports may not meet all of the needs of families and caregivers, is warranted. The present study suggests the need for preventative social services that are responsive to the needs of people with disabilities and their families, especially in areas where removal reasons of child welfare involvement have higher odds of occurring.

However, given that another body of existing literature suggests that parenting a youth with a disability can be a transformative and community-building-oriented experience – especially when families are part of a larger support network – this suggests a direction that family support services may want to head in a strengths-based direction (Greenberg, Seltzer, Krauss & Hea-Won, 1997; Hong, Seltzer & Krauss, 2001). While the latter studies appear to be more generalizable to an engaged group of parents with strong circles of support who are connected to the research and/or social service community, the development of mechanisms for supporting families at risk of child welfare involvement who may not be as inclined to access such services is of utmost importance. If prevention-oriented services offered by the disability service could create positive experiences and connections of this nature, risk of maltreatment might be reduced, as would risk of out-of-home placement.

7.5. Housing insecurity for families with youth with disabilities

Although our results suggest that only 10% of youth were removed as a result of inadequate housing, and that this was less likely as compared to youth without disabilities, this is still a concern. The nexus between poverty and disability is well-established, especially as it relates to households in which youth are present (Parish & Cloud, 2006). Youth with disabilities are significantly more likely to live in poverty than their peers without disabilities, an exposure which can inform potentially adverse outcomes for this population. Given existing research on the economic implications of parenting a youth with a disability, these results make sense. For example, Parish, Grinstein-Weiss, Yeo, Rose & Rimmerman (2010) establish disability-related disparities in both assets and income in the United States, both of which could impact housing status. Further, the financial challenges of raising youth with autism (Parish, Thomas, Rose, Kilany & Shattuck, 2012), developmental disabilities (Parish, Rose & Swaine, 2010) multiple youth with disabilities (Ghosh & Parish, 2013) and youth with special health care needs (Parish, Rose, Dababnah, Yoo & Cassiman, 2012) are also noted. Also of note are the challenges to the financial well-being of single working-age mothers of youth with disabilities (Parish, Rose, Swaine, Dababnah & Marya, 2012). Finally, our study results may support existing research about housing insecurity (such as challenges in being able to pay monthly rent) as these challenges are noted among households inclusive of a person with a disability (Parish, Rose, Grinstein-Weiss, Richman, & Andrews, 2008). Housing insecurity among families inclusive of youth with disabilities needs to be taken into consideration by social service workers coming into contact with such families.

7.6. Adolescent alcohol or drug abuse a disproportionate problem

The only result with an odds ratio above 1.6 (low effect size) was the finding that youth with disabilities are 1.74 times more likely to be removed due to the youth's drug abuse (as opposed to alcohol abuse, at OR = 1.31). Although under 2% of youth with disabilities were removed from their families as a result of their own alcohol use, almost 4% were removed due to drug abuse. This suggests the presence of a very vulnerable sub-population of foster youth for whom it is known that access to substance use disorder treatment is a documented challenge (Washington State Department of Health, 2009; Slayter, 2010a, 2010b; Washington State Department of Social and Health Services, 2009). This should be an area of increased attention for youth-serving alcohol and drug treatment agencies, especially given the existing research on documented access barriers to such treatment for this population. Disability service agencies need to develop basic competencies in screening for substance use disorders and in providing prevention-related guidance to youth with disabilities to support them in their decision-making around alcohol and drug use.

7.7. A need to Bolster family relationships and circles of support

Existing research suggests that youth with disabilities are less likely to have family reunification as a permanency goal or case outcome — and more likely to have adoption as an outcome (Snowden et al., 2008; Courtney & Wong, 1996; Akin, 2011). The present study's findings support existing research — showing a 34% lower likelihood of reunification and a twofold increase in the rate of adoption for this population. Results related to the potential lack of consistent familial/caretaker relationships for youth with disabilities while in foster care and at discharge from foster care were also of concern. Consistency in connection to caregivers is an issue of special concern for youth who can benefit from their emotional attachment to a caregiver (Cicchetti & Toth, 2005). Therefore, that foster youth with disabilities were less likely to have family reunification as a goal or outcome are of particular concern. Also, given that youth with disabilities were less likely to live with kin, a reconsideration of how and whether kinship care can and should be adopted or encouraged for this population of foster youth is necessary. This issue may be of even greater concern for youth with previous adoption histories. These results have implications for extending circles of support beyond immediate family members while still in the community, possibly by targeting extended family members for the provision of respite services to families at risk of child welfare involvement and/or a removal.

7.8. Increased use of congregate care settings

The present study found that youth with disabilities were more than twice as likely to be placed in group homes or institutions, although when age and gender were controlled for, odds ratios fell below the marker for a small effect size (OR = 1.60), but were still more likely for the sample. This supports existing research on the restrictiveness of placements experienced by older foster youth with disabilities (National Council on Disability, 2008; Schmidt et al., 2013). Disparities in the use of group home or institutional (versus foster family home) placements are also of potential concern given the need for attention to placement in the least restrictive environment and the goal of community inclusion, suggesting the presence of potential community inclusion disparities, a key policy goal for the population with disabilities (Schmidt et al., 2013). The present study's results suggests the need for further, in-depth exploration of whether or not foster youth with disabilities are more likely to be placed in and/or in need of a higher level of care which may not be available in community based settings due to funding or bureaucratic concerns.

Concern for the outcomes of youth with disabilities in non-family congregate care settings who may be separated from their previous and/or primary circle of support should be paramount. Whether child welfare caseworkers and foster care providers are able to accommodate the needs of youth given public accommodation requirements under the Americans with Disabilities Act is unclear. For example, existing research suggests that foster youth with Individual Education Plans charted under the guise of the Individuals with Disabilities Education Act (IDEA) may not receive adequate care while in foster care (Geenen & Powers, 2006).

7.9. Transitional-aged youth with disabilities

The present study found that youth with disabilities comprised 52.7% of people in the transitional-age population. This finding is fairly consistent with Hill's (2012) research, which found a rate of 60% in the aging out population aged 17 and above. Given the presence of such a sizeable percentage of the population, there is increased need for child welfare caseworkers who specialize in adolescent services to become disability competent. Outcome data from the present study suggest lower rates of family reunification for youth in this age group, a finding which support's Hill's (2012) claim that young people with disabilities were less likely to have reunification or relative care. However, youth with disabilities were equally likely to be emancipated (83.9%), suggesting a need for these youth to have disability-specific supports available for their independent living plans after foster care exit. One such model is the “Take Charge” program, which is focused on fostering self-determination and quality of life as well as high school completion and job attainment (Lightfoot, 2014; Powers et al., 2012).

7.10. Implications for cross-system collaboration

Findings from the present study can inform child welfare and child welfare systems across the United States about areas in need of attention for prevention and service delivery improvements that will foster inter-system collaboration needed to support families in preventing removal, providing appropriate community-based supports while in foster care and promoting higher rates of family reunification (Lightfoot, 2014). While all youth in foster care are vulnerable, results suggest reasons to re-consider the special vulnerabilities and service needs of youth with disabilities to prevent removal, improve foster care outcomes and promote community inclusion. Especially important is the need for a strengths-based approach to working with youth with disabilities in child welfare settings (Lightfoot, 2014).

Foster children with disabilities who are facing foster care – especially those who are facing exit from the system – are reliant on both the child welfare and disability service systems — systems which have very different theoretical approaches to practice. Child welfare is usually an involuntary, time-limited intervention that is focused on monitoring with the goal of safety, permanence and well being, disability services are usually voluntary, with a focus on supports needed for a lifetime. Despite discussions about the needs of youth with disabilities in the child welfare system, these two systems do not appear to have a favorable history of collaboration, which may be understood in part as a function of their differences (Hill, 2009).

There is a wide gap between the underlying theoretical and practice approaches in each system, which suggests a need for the development of model collaboration initiatives in unique geographic locations (Lightfoot, 2014). In day-to-day casework, communication between the "lead" caseworker in both the child welfare and the disability systems needs to be established in order to streamline casework planning and implementation. At the administrative level, non-governmental collaboratives might be established as a resource exchange and cross-training mechanism (Lightfoot, 2014). One such example exists in Minnesota, where a Disability Child Welfare Collaborative was established in 2011 to bring together practitioners and researchers in the areas of child welfare, disability and education. Working to raise awareness of the needs of children with disabilities in each system, this group acts as a central resource to all three types of providers, and fosters opportunities for dialogue among providers around how to promote positive outcomes for youth with disabilities (Center for the Advanced Study of Child Welfare, 2016). A focus of this group's work is the attention paid to the need for ongoing cross-training between systems in an effort to build disability and child welfare competence — and the sense of who to turn to when unanticipated practice questions arise. Participants in a collaborative of this nature could become the expert in their own agency, functioning in a consulting capacity with other caseworkers or teachers — who could be encouraged by supervisors to seek help that is specific to the child they are working with (Coyle, 2014). Child welfare caseworkers faced with a child with a disability on their caseload need to develop basic disability-related competencies.

For example, caseworkers should understand that such children will have a variety of needs even if they are in the same diagnostic category. For example, a baby who is diagnosed with failure-to-thrive may need early intervention services that can be provided in foster homes, which will result in training for foster parents regarding the child's care, whereas a child with Down Syndrome might have more specialized medical needs, such as cardiac problems. Such variation in needs may impact the ways in which child welfare workers work towards exit from foster care, and positive outcomes (Name redacted, 2016-In press). Finally, efforts to develop legislative guidelines around the need for compliance with the Foster Care Independence Act (FCIA) of 1999, which requires that when youth are served via the John H. Chafee Foster Care Independence Program funds, transition services must be coordinated with systems and/or programs designed for people with disabilities (Geenen & Powers, 2007).

Along with focusing on fostering substantive collaboration between child welfare, education and disability providers, there is also a need to foster disability competence among foster and pre-adoptive parents. This is especially important given that most foster placements are emergency placements (Coyle, 2014). Trainings on disability competence can include discussions on promoting the inclusion of children with disabilities into everyday life and helping others see such children as valued and unique individuals. These trainings could also foster the development of parents' knowledge of child development – and disability-specific issues, such as communication techniques and the use of technologies – all of which may reduce frustration and foster attachment (Child Welfare League of America, CWLA, 2012; Name redacted, 2016-In press).

In addition to the development of disability competency trainings, child welfare providers could develop peer-to-peer mentoring and support groups for new foster and pre-adoptive parents who have taken in children with disabilities. Therefore, those who work with the children the most closely can build their own competence and confidence in their care work. Especially important would be discussions and skill-building activities related to the need for foster and adoptive parents to develop leadership skills in advocating for their children in the schools and in the community around Individual Education Plans and Section 504 plans. Finally, parent advocacy trainings provided by state non-profits might be targeted towards foster parents and potential foster parents (Name redacted, 2016-In press; Valverde, Chambers, Dho, & Schaefer, 2011).

7.11. Recommendations for future research

The baseline data reported upon herein leave many questions in need of further exploration. Four areas of particular importance for future research are identified. First, given the apparent disparity in the use of group home or institutional settings for youth with disabilities, reasons for such a disparity should be explored especially given the general and ideal trend towards moving away from the use of institutional settings for all foster youth. Second, given the preference of placing youth who are removed from family or caregivers with kin, understanding more about the placement process and potential barriers to such placements is needed. Third, in states where relationships exist between child welfare and disability service systems exist, considerations of what does and does not work towards the goals of self-determination and community inclusion should be examined at both the state and community level with a particular focus on the preparedness of caseworkers in both sectors to interact with the other system and potentially across case practice paradigms. Fourth, given the field's increasing attention to a focus on resiliency and protective factors as they relate to child welfare outcomes, research on the ways in which youth with disabilities foster resiliency and exhibit unique protective factors should be explored (Lightfoot, 2014).

References

ACF, Administration for Children and Families (2007). AFCARS disability/special needs table. Retrieved May 4th, 2015, from the World Wide Web http://www.acf.hhs.gov/sites/default/files/cb/afcars_tb2.pdf

ACF, Administration for Children and Families (2012). Adoption and Foster Care Analysis and Reporting System (AFCARS) Guide to an AFCARS assessment review. Retrieved on September 25, 2015 at https://www.acf.hhs.gov/sites/default/files/cb/afcars_assessment_review_guide.pdf

AFCARS (2007). *Technical Bulletin Number Fourteen: Disability Information.* Washington DC: Administration for Children and Familieshttp://www.acf.hhs.gov/sites/default/files/cb/afcars_tb1.pdf

Akin, B. (2011). Predictors of foster care exists to permanency: A competing risks analysis of reunification, guardianship and adoption. *Children and Youth Services Review*, *33*(6), 999–1011.

Arnett, J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, *55*(5), 469–480.

Barahal, R., Waterman, J., & Martin, H. (1981). The social cognitive development of abused children. *Journal of Consulting and Clinical Psychology*, *49*, 508–516.

Bonner, B. L., Crow, S. M., & Hensley, L. D. (1997). State efforts to identify maltreated children with disabilities: A follow-up study. *Child Maltreatment*, *2*(1), 52–60.

Bureau, Children's (2009). *Adoption and Foster Care Analysis and Reporting System (AFCARS) State Guide to an AFCARS Assessment Review* (4th ed.). Baltimore, Maryland: Children's Bureau. Retrieved on April 4, 2015 at http://www.acf.hhs.gov/programs/cb/systems/afcars/guide/index.htm.

Bureau, Children's (2015). Overview of permanency planning. Retrieved September 25, 2015 at: https://www.childwelfare.gov/topics/permanency/overview/

Center for the Advanced Study of Child Welfare (2016). Working to improve outcomes for parents and children with disabilities in child welfare. Retrieved on January 9, 2016 from http://cascw.umn.edu/community-engagement-2/dcwc/

Chen, H., Cohen, P., & Chen, S. (2010). How big is a big odds ratio? Interpreting the magnitudes of odds ratios in epidemiological studies. *Communications in Statistics Simulation and Computation*, *39*(4), 860–864.

Child Welfare League of America (CWLA) (2012). *The risk and prevention of maltreatment of children with disabilities.* Washington, DC: Child Welfare Information Gateway.

Cicchetti, D., & Toth, S. L. (2005). Child Maltreatment. *Annual Review of Clinical Psychology*, *1*, 409–438.

Cornell University Family Life Development Center (2012). *AFCARS Guide.* Ithaca, NY: Cornell University Family Life Development Center.

Courtney, M., & Wong, Y. (1996). Comparing the timing of exits from substitute care. *Children and Youth Services Review*, *18*(4–5), 307–334.

Coyle, S. (2014). Children with intellectual disabilities in foster care. *Social Work Today*, *14*(6), 22.

Crosse, S., Kaye, E., & Ratnofsky, A. (1992). *A report on the maltreatment of children with disabilities.* Washington, DC: Westat, Inc.

D'Andrade, A. (2005). Placement instability in child welfare. In G. P. Mallon, P. Hess, & B. McGowan (Eds.), *A Handbook of Children, Youth, and Family Services* (pp. 608–622). New York, NY: Columbia University Press.

Festinger, T. (2005). Adoption and disruption. In G. Mallon, & P. Hess (Eds.), *Child welfare for the 21st century: A handbook of practices, policies, and programs*. New York: Columbia University Press.

Geenen, S., & Powers, L. (July 2006). Are we ignoring youths with disabilities in foster care? An examination of their school performance. *Social Work*, *51*(3), 233–241.

Geenen, S., & Powers, L. (2007). "Tomorrow is another problem": The experiences of youth in foster care during their transition into adulthood. *Children and Youth Services Review*, *29*(8), 1085–1101.

Ghosh, S., & Parish, S. L. (2013). Prevalence and economic well-being of families raising multiple children with disabilities. *Children and Youth Services Review*, *35*, 1431–1439.

Goerge, R. M., Voorhis, J. V., Grant, S., Casey, K., & Robinson, M. (1992). Special-education experiences of foster children: An empirical study. *Child Welfare*, *71*(5), 419–437.

Government Accounting Office (2003). Child welfare: Most states are developing state-wide information systems, but the reliability of child welfare data could be improved. Retrieved on April 4, 2015 at http://www.gao.gov/products/GAO-03-809

Greenberg, J., Seltzer, M., Krauss, M., & Hea-Won, K. (1997). The Differential Effects of Social Support on the Psychological Well-Being of Aging Mothers of Adults With Mental Illness or Mental Retardation. *Family Relations*, *46*(4), 383–394.

Guterman, N. B., & Taylor, C. (2005). The prevention of physical child abuse and neglect. In P. Hess, & G. Mallon (Eds.), *Child welfare for the twenty-first century: A handbook of practices, policies, and programs*. New York: Columbia University Press.

Haddock, C., Rinsdkopf, D., & Shadish, W. (1998). Using odds ratios as effect sizes for meta analysis of dichotomous data: A primer on methods and issues. *Psychological Methods*, *3*, 339–353.

Hill, K. (2009). Individuals with Disabilities Act of 2004 and the John H. Chafee Foster Care Independence Act of 1999: What are the policy implications for youth with disabilities transitioning from foster care? *Child Welfare*, *88*(2), 5–23.

Hill, K. (2012). Permanency and placement planning for older youth with disabilities in out-of-home placement. *Children and Youth Services Review*, *34*, 1418–1424.

Hill, B. K., Hayden, M. F., Lakin, K. C., Menke, J., & Amado, A. N. (1990). State-by-state data on children with handicaps in foster care. *Child Welfare*, *69*(5), 447–462.

Hong, J., Seltzer, M. M., & Krauss, M. W. (2001). Change in Social Support and Psychological Well-Being: A Longitudinal Study of Aging Mothers of Adults with Mental Retardation. *Family Relations*, *50*(2), 154–163.

H.R. 867 (105th): Adoption and Safe Families Act of 1997.

Hughes, R., & Rycus, J. (1998). *Developmental disabilities and child welfare*. Washington, DC: Child Welfare League of America Press.

Jonson-Reid, M., Drake, B., Kim, J., Porterfield, S., & Han, L. (November 2004). A prospective analysis of the relationship between reported child maltreatment and special education eligibility among poor children. *Child Maltreatment*, *9*(4), 382–394.

Lightfoot, E. (2014). Children and Youth with Disabilities in the Child Welfare System: An Overview. *Child Welfare*, *93*(2), 23–45.

Lightfoot, E., & LaLiberte, T. (April 2006). Approaches to child protection case management for cases involving people with disabilities. *Child Abuse & Neglect*, *30*(4), 381–391.

Lightfoot, E., Hill, K., & LaLiberte, T. (2011). Prevalence of children with disabilities in the child welfare system and out of home placement: An examination of administrative records. *Children & Youth Services Review*, *33*(11), 2069–2075. http://dx.doi.org/10.1016/j.childyouth.2011.02.019.

McRoy, R. G. (2008). Acknowledging Disproportionate Outcomes and Changing Service Delivery. *Child Welfare*, *87*(2), 205–210.

Mallon, G., & McCartt Hess, P. (2006). *Child Welfare for the 21st Century*. New York: Columbia University Press.

National Council on Disability (2008). *Youth with disabilities in the foster care system: Barriers ti success and proposed policy solutions. Washington, Author.*

Parish, S. L., & Cloud, J. M. (2006). Financial well-being of young children with disabilities and their families. *Social Work*, *51*(3), 223–232.

Parish, S. L., Rose, R. A., Swaine, J. G., Dababnah, S., & Marya, E. T. (2012b). Financial well-being of single, working-age mothers of children with developmental disabilities. *American Journal on Intellectual and Developmental Disabilities*, *117*, 400–412.

Parish, S. L., Grinstein-Weiss, M., Yeo, Y., Rose, R. A., & Rimmerman, A. (2010b). Assets and income: Evidence of disability-based disparities in the U. S. *Social Work Research*, *34*, 71–82.

Parish, S. L., Rose, R. A., Dababnah, S., Yoo, J., & Cassiman, S. A. (2012c). State-level income inequality and family burden of US families raising children with special health care needs. *Social Science & Medicine*, *74*, 399–407.

Parish, S. L., Rose, R. A., Grinstein-Weiss, M., Richman, E. L., & Andrews, M. E. (2008). Material hardship in US. families raising children with disabilities. *Exceptional Children*, *75*(1), 71–92.

Parish, S. L., Rose, R. A., & Swaine, J. G. (2010a). Financial well-being of US parents caring for co- resident children and adults with developmental disabilities: An age-cohort analysis. *Journal of Intellectual & Developmental Disability*, *35*, 235–243.

Pecora, Kessler, O'Brien, White, Hiripi, English, White, & Herrick (2007). Educational and employment outcomes of adults formerly placed in foster care: Results from the Northwest Foster Care Alumni Study. *Children and Youth Services Review*(12), 1459–1481 Dec2006, 28.

Powers, L., Geenen, S., Powers, J., Pommier-Satya, S., Turner, A., Dalton, L., Drummond, D., Swank, P., et al. (2012). My life" effects of a longitudinal randomized study of self-determination-enhancement on the transition outcomes of youth in foster care and special education. *Children and Youth Services Review*, *34*(11), 2179–2187.

Renne, J., & Mallon, G. P. (2005). Facilitating permanency for youth: The overuse of long term foster care and the appropriate use of another planned permanent living arrangement as permanency goal for adolescents in foster care. In G. P. Mallon, & P. Hess (Eds.), *Child welfare for the 21st century: A handbook of children, youth, and family services*. New York: Columbia University Press.

Rosenthal, J., Groze, V., & Aguilar, G. (1991). Adoption outcomes for children with handicaps. *Child Welfare*, *70*(6), 623–636.

Scherr, T. G. (2007). Educational experiences of children in foster care. *School Psychology International*, *28*(4), 419–436. http://dx.doi.org/10.1177/0143034307084133.

Schmidt, J., Cunningham, M., Dalton, L., Powers, L., Geenen, S., & Orozco, C. (2013). Assessing restrictiveness: A closer look at the foster care placements and perceptions of youth with and without disabilities aging out of care. *Journal of Public Child Welfare*, *7*, 586–609.

Schormans, A., Coniega, M., & Renwick, R. (2006). Placement stability: Enhancing quality of life for children with developmental disabilities. *Families In Society: The Journal of Contemporary Social Services*, *87*(4), 521–528.

Slayter, E. (2010a). Medicaid-covered substance abuse treatment utilization among people with intellectual disabilities. *Intellectual and Developmental Disabilities*.

Slayter, E. (2010b). Not immune: Access to substance abuse treatment for youth with intellectual disabilities. *Journal of Disability Policy Studies*, *20*(4), 195–204.

Slayter, E., & Springer, C. (2011). Child welfare-involved youth with intellectual disabilities: Pathways into and placements in foster care. *Intellectual and Developmental Disabilities*, *49*(1), 423–429.

Smith, J. (2002). Foster care children with disabilities. *Journal of Health & Social Policy*, *16*(1/2), 81–92.

Snowden, J., Leon, S., & Sieracki, J. (2008). Predictors of children in foster care being adopted: A classification tree analysis. *Children and Youth Services Review*, *30*(11), 1318–1327.

Sobsey, D. (1994). *Violence and abuse in the lives of people with disabilities: The end of silent acceptance?* Baltimore, MD: Paul H. Brookes.

Sobsey, D., Randall, W., & Parilla, R. (1997). Gender differences in abused children with and without disabilities. *Child Abuse & Neglect*, *21*, 139–152.

Strickler, H. (2001). Interaction between family violence and mental retardation. *Mental Retardation*, *39*(6), 461–471.

Sullivan, P., & Knutson, J. (2000). Maltreatment and disabilities: A population-based epidemiological study. *Child Abuse and Neglect*, *24*(10), 1257–1273.

Van Ijzendoorn, M., Rutgers, A., Bakermans-Kranenburg, vanDaalen, E., Dietz, C., Buitelaar, J., Swinkels, S., Naber, F., & van Engeland, H. (2007). Parental sensitivity and attachment in children with autism spectrum disorder: Comparison with children with mental retardation, with language delays, with typical development. *Child Development*, *78*(2), 597–608.

Valverde, J., Chambers, C., Dho, M., & Schaefer, R. (2011). Integrating educational advocacy into child welfare practice: Working models. *Journal of Gender, Social Policy and the Law*, *20*(1), 202–231.

Vig, S., & Kaminer, R. (2002). Maltreatment and developmental disabilities in children. *Journal of Developmental and Physical Disabilities*, *14*(4), 371–386.

Washington State Department of Health (2009). *Youth with Disabilities' Risk Factors for Alcohol*. Office of Healthy Communities, Seattle, Washington: Tobacco and Drug Use.

Washington State Department of Social and Health Services, Division of Alcohol and Substance Abuse (2009). *Washington State's Plan for Youth Suicide Prevention*. Retrieved on January 5, 2016 from: http://www.doh.wa.gov/Portals/1/Documents/Pubs/160-024_YouthWithDisabilitiesRiskFactorsForSubstanceAbuse.pdf.

Weaver, Keller, & Loyek (2006). Children with disabilities in the child welfare system. In G. Mallon, & P. McCartt Hess (Eds.), *Child Welfare for the 21st Century* (pp. 173–184). New York: Columbia University Press.

Westat, Inc. (1993). *A report on the maltreatment of children with disabilities*. Washington, DC: National Center on Child Abuse and Neglect.