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Differential Risks: How Disability Shapes Risk in the Transition to Adulthood for Youth who Age Out of Foster Care

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Abstract

Objective: This study examines how disability is associated with risk during the transition to adulthood for youth who age out of foster care and considers how experiences in the child welfare system contribute to these associations.

Background: The transition to adulthood is important for later socioeconomic standing, health, and wellbeing. Youth who age out of foster care with disabilities may require a high level of support during this transition yet may lack support.

Method: This study employs linear probability models to estimate the association between disability and incarceration, homelessness, childbearing, and substance abuse between ages 17 and 21 using linked administrative data from the National Data Archive on Child Abuse and Neglect (N=5,221).

Results: Having a physical or sensory disability is associated with lower risk in the transition to adulthood. Alternatively, having an emotional or mental related disability is associated with increased risk of incarceration and homelessness, but the association with homelessness is accounted for by child welfare experiences.

Conclusion: Due to the importance of foster care and child protective histories in explaining some risky outcomes for youth with emotional and mental disabilities, policy makers and practitioners should include those early stages of care when seeking to improve outcomes in the transition to adulthood for youth with disabilities who age out of foster care.

Keywords

Disability; foster care; transition to adulthood; incarceration; childbearing; homelessness; substance use

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Author Statement:

Erin McCauley: Conceptualization; Data curation; Formal analysis; Methodology; Writing

Conflict of Interest

The author has no conflict of interest.

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1.1 INTRODUCTION

The transition to adulthood is an important life course transition with implications for health, wellbeing, employment, and income later in life (Masten et al., 2004; D. Osgood, Foster, Flanagan, & Ruth, 2005; W. Osgood, Foster, & Courtney, 2010). This time period is marked by a density of important life choices and shifting social roles (Arnett, 2000). For youth with disabilities, this time period can be especially difficult (Janus, 2009). Youth with disabilities face difficulties in securing employment, are less likely to complete a high school degree or higher education, and face barriers to independent living (Ameri et al., 2017; Janus, 2009; McCauley, 2019; She & Livermore, 2008; Bureau of Labor Statistics, 2017). One particularly vulnerable subpopulation during this time is youth with disabilities who age out of foster care. These youth face both the increased difficulty and potential need for increased support of having a disability *and* the increased difficulty and often receding support of aging out of foster care.

Indeed, recent work examining the transition to adulthood for youth with disabilities who are alumni of the foster care system has found evidence suggesting that these youth face particular and unique risks. They have lower levels of education and lower self-esteem (Geenen & Powers, 2006; Smithgall, Gladden, Yang, & Goerge, 2005). A recent study examining the transition to adulthood with a focus on youth with emotional disabilities found that these youth were less likely to complete high school and were enrolled in post-secondary education at lower rates than their peers (Cheatham, Randolph, & Boltza, 2020). Youth with disabilities who are transitioning to independent living have unique needs which are often not directly met through existing services (Hill, 2010). Yet, this population is largely understudied in the literatures which independently examine disability and foster care in the transition to adulthood (recent exceptions include (Blakeslee et al., 2020; Cheatham et al., 2020). These initial studies provide compelling evidence of increased risk in the transition to adulthood for youth with disabilities who age out of foster care.

In this study I examine the association between disability and the probability of incarceration, homelessness, childbearing, and substance abuse in the transition to adulthood and then re-estimate these associations adjusting for experiences in the child welfare system. These analyses allow us to better understand risk in the transition to adulthood for those with various disability types, and the potential role that child welfare experiences may play.

1.2 BACKGROUND

1.2.1 Prevalence—In 2017 more than 690 thousand children were served by the child welfare system in the United States (The AFCARS Report: Preliminary Fiscal Year 2017 Estimates as of August 10, 2018 - No. 25, 2018). Of the almost 443 thousand children in foster care in 2017 more than 28 thousand had the case goal of emancipation (The AFCARS Report: Preliminary Fiscal Year 2017 Estimates as of August 10, 2018 - No. 25, 2018). The prevalence of disability among foster care youth increases with child age, with more than half of older foster care youths reporting a disability (Hill, 2012a, 2012b). In fact, children with disabilities are nearly three and a half times more likely to experience maltreatment than those without disabilities (Sullivan & Knutson, 2000).

1.2.2 The Transition to Adulthood—Youth who age out of foster care without finding a permanent placement face risk in the transition to adulthood. Research on this transition has found that parental assistance is a key aspect of successful transition to adulthood, with parents providing “scaffolding” to support the many transitions that occur during this time and stepping in to help course correct when risky choices are made (Swartz, Kim, Uno, Mortimer, & O’Brien, 2011). For example, one study found that having distress or alcohol problems were associated with more returns to living at home during the transition to adulthood (Sandberg-Thoma, Snyder, & Jang, 2015). Youth who age out of foster care are not only contending with a history of family instability throughout childhood, but also may lack the safety net of parental assistance during this transition.

Disability on its own is associated with worse educational outcomes, difficulty securing employment, and difficulty in independent living (Hendey & Pascal, 2008; Janus, 2009). Youth with disabilities who have been involved in the child welfare system likely face compounded risks and may have less support from their families. The limited research on this topic largely finds that youth with disabilities do in fact face difficulty in the transition to adulthood.

Qualitative research has found that youth with disabilities who are alumni of the child welfare system face high levels of risk and instability (Geenen & Powers, 2007; Harwick, Unruh, & Lindstrom, 2020). Whereas research often views disability as a risk, the narrative captured by Geenen and Powers finds that lack of training for foster parents and lack of special education services plays a key role in the difficulty that youth with disabilities in the foster care system face (2007). Geenen and Powers describe foster parents lamenting the lack of training for how to support a child with disabilities, how to prepare them for the transition to adulthood, and especially the difficulty in understanding how to navigate special education and their rights and responsibilities in that process (2007).

Additionally, youth with disabilities are more likely to have experiences in their time during foster care which predict difficulty in the transition to adulthood, such as greater placement instability (Lee et al., 2018; Reilly, 2003; Slayter & Springer, 2011; E. M. Slayter, 2016). Youth with disabilities in foster care also have more restrictive placements (Lee et al., 2018; Schmidt et al., 2013), are overrepresented in out-of-home placements (Hill, 2012b) and have more instability in placements (Reilly, 2003; E. M. Slayter, 2016). While this population has largely been overlooked in the existing scholarship, a blossoming literature has advocated for more focus on this population and the inclusion of this population in research on child welfare (Blakeslee et al., 2013; Cheatham et al., 2020; Powers et al., 2012).

1.2.3 Domains of Risk—This study focuses on four domains of risk in the transition to adulthood—incarceration, homelessness, childbearing, and substance abuse. These four areas are considered domains of risk in the broader transition to adulthood literature and are more common among foster care youth (for examples see (Combs, Begun, Rinehart, & Taussig, 2017; Dworsky, Napolitano, & Courtney, 2013; Jonson-Reid & Barth, 2000). Criminal legal system involvement is a primary risk factor during the transition to adulthood. Incarceration has short- and long-term consequences for income and education (Apel & Sweeten, 2010; Pettit & Western, 2004; Western, 2002; Western & Pettit, 2010). Foster care

involvement, especially at older child ages, is associated with increased risk of incarceration during adolescence (Jonson-Reid & Barth, 2000).

Youth who age out of foster care are more likely to experience homelessness during the transition to adulthood (Dworsky et al., 2013), which is associated with extended or fractured transitions and exposure to other risks such as substance use or trauma (Hagan & McCarthy, 2005). Placement instability, a history of physical abuse, and mental health symptoms were associated with increased relative risk of homelessness among youth who aged out of foster care (Dworsky et al., 2013). Childbearing is another important life event that has the power to shift trajectories in the transition to adulthood (Galambos & Krahn, 2008; Macmillan & Copher, 2005; Oesterle, Hawkins, Hill, & Bailey, 2010; Oxford, Gilchrist, Gillmore, & Lohr, 2006; Svoboda, Shaw, Barth, & Bright, 2012). Becoming a parent during the transition to adulthood is associated with increased anger (Galambos & Krahn, 2008) and divergent paths for education, employment, and income (Oxford et al., 2006; Wu & Wolfe, 2001). Foster care involvement is associated with high rates of pregnancy and childbearing during young adulthood and adolescence (Barrett, Katsiyannis, Zhang, & Kingree, 2015; Combs et al., 2017; Svoboda et al., 2012).

Substance use is associated with precarious transitions to adulthood (Oesterle et al., 2010), including elevated risks of later life substance use, aggression, risk taking, and delinquency (Schulenberg et al., 2005). Youth who have “problem-prone” transitions to adulthood or who face psychological trauma during that transition are both more likely to struggle with substance use (Oxford et al., 2006). Older foster care youth and youth who emancipate from the foster care system are more likely to struggle with substance use (Keller, Blakeslee, Lemon, & Courtney, 2010).

1.2.4 Differential Child Welfare Experiences—An important consideration in the study of the transition to adulthood for youth with disabilities who have aged out of foster care is that disability is associated with differential experiences within the child welfare system. Youth with disabilities are more likely to have restrictive placements, report lower quality of life while in foster care, and are over-represented in out-of-home placements (Hill, 2012a, 2012b; Lee et al., 2018). These experiences within the system are associated with risks in their own right (Rubin et al., 2004). The estimation of the association between disability and risk during the transition to adulthood could be spurious if there is another variable which is associated with both—in this case differential experiences in the child welfare system. Therefore, a secondary objective of this study is to examine the association between disability and risk in the transition to adulthood with and without adjusting for child welfare experiences to explore the potential role of this earlier risk.

1.3 This Study

In this study, I will examine how disability shapes the risk of incarceration, homelessness, childbearing, and substance use among youth who age out of the foster care system. I then estimate these associations adjusting for differences in child welfare experiences using linked administrative data from the National Data Archive on Child Abuse and Neglect. The results of this study allow us to better understand the risks that youth with disabilities who

age out of foster care face compared to their peers without disabilities and provide insight into the potential role of differential experiences in the child welfare system in these risks for those with disabilities during the transition to adulthood.

2.1 MATERIALS AND METHODS

To answer these questions, this study uses linear probability regression models to explore the association between disability and outcomes related to risk during the transition to adulthood for youth who are identified as likely to age out of foster care at age 17. I use linear probability models because coefficients are compared across multiple models for each outcome. This study uses linked administrative data available from the National Data Archive on Child Abuse and Neglect (available at <https://www.ndacan.acf.hhs.gov/>). The data used in this publication were made available by the National Data Archive on Child Abuse and Neglect, these data were originally collected by the states and provided to the Children's Bureau. Funding was provided by the Children's Bureau, U.S. Department of Health and Human Services. The collector of the original data, the funder, the Archive, Cornell University and their agents or employees bear no responsibility for the analyses or interpretations presented here.

2.2 Key Variables

This study relies on variables from several datasets, which I will briefly outline before describing the independent, dependent, and control variables in depth. The dependent variables in this study are from the National Youth in Transition Database (NYTD), which is a longitudinal dataset that follows youth who are identified as likely to age out of foster care without a permanent placement. I link the youth in the NYTD dataset to their foster care histories from the Adoption and Foster Care Analysis and Reporting System (AFCARS) and their child protective (CPS) histories from the National Child Abuse and Neglect Data System (NCANDS). I link these datasets using a unique child identifier. The AFCARS and NCANDS data are population data, and the NYTD data is population data at Wave 1 (age 17) and remains population data at Wave 2 and Wave 3 for more than half of states (ages 19 and 21). Twelve states transition to a simple random sample for the follow up waves: Washington, Texas, Tennessee, Pennsylvania, Ohio, Massachusetts, Louisiana, Kentucky, Iowa, Indiana, Illinois, and Georgia. I use the NYTD data for youth who were age 17 in fiscal year 2011.

2.2.1 Independent Variables—The independent variables for this study reflect disability statuses and are taken from the AFCARS data. Disability is a categorical variable indicating having an emotional or mental disability, a physical or sensory disability, both an emotional or mental and a physical or sensory disability, other type of disability, or no disability. In the original data, there five binary indicators of disability—intellectual disability, visually or hearing impaired, physically disabled, emotionally disturbed, and other medically diagnosed condition requiring special care. The exact terminology and capitalization strategy in the below descriptions are taken from the original data. The comparison group for the analyses are those who do not have a disability.

Youth with an emotional or mental related disability in this study include youth with a clinical diagnosis of intellectual disability or emotionally disturbed. Intellectual disability refers to youth with significantly subaverage general cognitive and motor functioning existing concurrently with deficits in adaptive behavior manifested during the developmental period that affects socialization and learning (including Down Syndrome, Borderline Intellectual Functioning, Hydrocephalus, Microcephaly, and all degrees of Intellectual limitations). Emotional disturbance refers to youth with a condition exhibiting one or more of the following characteristics: An inability to build or maintain satisfactory interpersonal relationships; inappropriate behaviors or feelings under normal circumstances; a pervasive mood of unhappiness or depress; or a tendency to develop physical symptoms or fears associated with personal problems (including those with Schizophrenia, Autism, Adjustment Disorders, Attention Deficit an Disruptive Disorders, Anxiety Disorders, Eating Disorders, Impulse Control Disorder, Mood Disorders, Personality Disorders, Reactive Attachment Disorder, Psychotic Disorders, Somatoform Disorder, and Tourette Syndrome).

Youth with a physical or sensory related disability in this study include youth who are visually or hearing impaired and those who are physically disabled. Youth are considered to have a visual or hearing impairment (sensory impairment) are youth who have impairments which affect educational performance or development (including blindness and low vision, cataracts, congenital anomaly of the eye, Glaucoma, Diabetic Retinopathy, Retinal Detachment and retinal defects, Visual Disturbances, Deafness, and hearing loss). Youth are considered physically disabled if they have a condition that adversely affects day-to-day motor functioning (including Cerebral Palsy, Spina Bifida, Multiple Sclerosis, orthopedic impairments, arthritis, Brittle Bones or Osteogenesis Imperfecta, Chronic Motor Tic Disorder, Club Foot, Diplegia, Muscular Dystrophy, Myasthenia Gravis, Paralysis, Poliomyelitis, and Rheumatoid arthritis).

Both emotional or mental and physical and sensory indicate youth who report both types of disability. No disability refers to youth without a clinically diagnosed disability. Other disability is a category in the original data that indicates a medically diagnosed condition requiring special care that does not include the aforementioned conditions or disabilities, largely consisting of chronic illnesses.

Other disabilities include those with Acquired Immunodeficiency Syndrome (AIDS), Aplastic Anemia, Asthma, Asperger's Syndrome, not specified Pervasive Developmental Disorder, blood disorders that require hospitalization once a month, cancer, Child Disintegrated Disorder, Chronic Granulomatous Disease, Cleft palate, Coagulation Defects, Congenital cystic lung, Congenital heart anomaly, Crohn's disease, Cushing's syndrome, Cystic Fibrosis, Diabetes, Immune Mechanism disorders, Encephalopathy, epilepsy, fetal alcohol syndrome, fetal drug addiction, heart murmur, heart disease, hemophilia, hypertension, Human Immunodeficiency Disease (HIV), Human T-Cell Lymphotropic Virus (III), Immunodeficiency, kidney disease, Klinefelter's syndrome, learning disabilities, Leukemia, Liver disease, lupus, malignant Neoplasms, misplaced facial feature, Organic brain Syndrome, pancreatic disease, Rett Disorder, Sarcomas, Seizure Disorder, Shaken Infant Syndrome, late effects of Tuberculosis, and nutritional deficiency.

2.2.3 Dependent Variables—The dependent variables focus on indicators of risk in the transition to adulthood—childbearing, homelessness, incarceration, and substance abuse. These variables are taken from the NYTD data. Youth who reported having a child, experiencing homelessness, being incarcerated, or struggling with substance use after the baseline at age 17 and before the final wave at age 21 are marked as 1 and those who do not are marked as 0 for each outcome. Participants must have participated in all three waves to be included in the analysis.

2.2.4 Control Variables—The first set of controls are demographic characteristics taken from the NYTD data. These controls are race (Non-Hispanic White, Non-Hispanic Black, Hispanic, Other), gender (male, female), past experience with the outcome (for example if the youth experienced incarceration prior to age 17 for the dependent variable of incarceration), and if the youth lives in a metro, non-metro urban, or rural area. After examining the association between the independent variable and dependent variables using the information included in the NYTD data, I reexamine these associations when controlling for youth's child welfare experiences (including CPS history and foster care experiences), and service receipt in the transition to adulthood. Much of the research examining youth aging out of foster care does not control for detailed histories, so examining how these associations vary when controlling for these important histories can elucidate the role of these experiences in the transition to adulthood, as well as clarify the light in which to interpret studies that do not have access to these histories. Additionally, examining how these associations change when controlling for differing past experiences may help to identify areas within the child welfare system to intervene.

The second level of controls focus on experiences within the child welfare system. From AFCARS, which focuses on foster care experiences, I include controls for the number of removals, number of placements, total days in foster care, if the youth received Medicaid, if the youth received SSI/SSDI disability benefits, the relationship status of the youth's removal family (married couple, unmarried couple, single parent, other/not sure), and categories to reflect removal reasons (parental risk, child risk, abuse, neglect, or other). The number of removals is the number of times that the youth was removed from their caregiver's home and put into the foster care system. The number of placements is the number of places the child was cared for in while in the foster care system (i.e. the number of foster care families or group home placements). The Medicaid and SSI/SSDI indicators are binary and reflect if the foster placement ever received those benefits for the youth. I created categories to reflect removal reasons and the indicators are binary with 1 indicating that any removal ever included that reason. Parent risk includes parent alcohol or drug use, housing issues, or the incarceration of the parent. Child related risks include if the removal was due to child alcohol or drug use, the child's disability, or the behavioral issues of the child. Abuse includes physical or sexual abuse. Neglect includes neglect. Other reason includes the inability of the family to cope, child abandonment, if the parents died, or if the parents relinquished the child. From NCANDS, which focuses on CPS histories, I include controls for the number of victimizations, number of reports, and if the documented abuser is ever a parent.

The third level of control variables included in this study focus on service receipt in the transition to adulthood. This data is taken from the NYTD services file, and details service receipt in six-month increments. These control variables are binary, indicating if the participant received services for that category of service or program during the transition to adulthood. There are 13 categories of service receipt; special education, independent living needs assessment, academic support, post-secondary educational support, career preparation, employment or vocation training, budget and financial management, housing education, health education, family support and health marriage education, mentoring, supervised independent living, room and board financial assistance, educational financial assistance, and other financial assistance. More about each service or program can be found in the NYTD Services File Codebook.

2.3 Analytic Strategy

This project relies on logistic and linear probability models. The results were substantively consistent across methods, so in order to compare coefficients across model specifications the linear probability models are reported here. For each outcome there are three models for each dependent variable. Model 1 is a multivariate linear regression model including controls for demographic characteristics from NYTD. Model 2 is a multivariate linear regression model which controls for demographic information, youth's foster care experiences from AFCARS, and youth's CPS history from NCANDS. Model 3 is a multivariate linear regression model which controls for demographic information, foster care experiences, CPS histories, and service receipt from NYTD Services File. Multiple imputation was used to account for missing data on control variables. Observations with missing data on the outcome are not included in the analytic sample.

3.1 RESULTS

Nearly 45% of the sample reported having a disability, with 37% reporting an emotional or mental related disability and seven percent reporting a physical or sensory disability as seen in Table 1. The sample was nearly half male (40%) and most were from urban metropolitan areas (81%). The sample was 45% non-Hispanic White, 32% non-Hispanic Black, and 18% Hispanic. On average, these youth had nearly seven placements, with 1.28 removals, and 1762 days spent in foster care. More than half of youth were taken from single-parent caregiving families (55%), and the most common category for removal was neglect (49%). Youth had an average of 3.15 CPS reports, one victimization, and a third (33%) of youth had at least one CPS report where the abuser was a parent.

The descriptive analysis, found in Table 2, finds that males and non-Hispanic Whites make up a larger proportion of those with disabilities than those without. This is consistent with the existing literature in this area (Lightfoot, Hill, & LaLiberte, 2011). This descriptive analysis also shows that youth with disabilities had more removals, spent more days in foster care, were younger when they entered foster care, a higher proportion received SSI/SSDI disability benefits, and they had lower rates of parental risk removal reasons, but higher prevalence of child risk and other reasons for removal. On average, youth with disabilities

had more CPS reports and the proportion of youth with disabilities who had a parent as their abuser was lower than those without.

3.1.1 Emotional or Mental Disability

Having an emotional or mental related disability was significantly associated with a higher risk of incarceration ($b=0.05$) and homelessness ($b=0.05$), moderately associated with a higher risk of substance abuse ($b=0.02$) and significantly associated with a lower risk of having a child ($b= -0.04$) net of demographic information, as seen in Model 1 of Table 3. After controlling for foster care and CPS histories in Model 2 of Table 3, having an emotional or mental disability was significantly associated with a higher risk of incarceration ($b=0.03$) and a lower risk of having a child ($b= -0.05$). However, after controlling for child welfare experiences having a mental or emotional related disability was not significantly associated with homelessness nor substance abuse, thus indicating that the results in Model 1 may be a result of variation in those early experiences instead of an independent association with emotional or mental disability. The results were largely the same between Model 2 and Model 3, indicating that adjusting for services received during the transition to adulthood did not change the significance of the relationship between disability and the outcomes.

3.1.2 Physical or Sensory Disability

Having a physical or sensory disability was significantly associated with a lower risk of homelessness ($b= -0.14$), and moderately associated with a lower risk of incarceration ($b= -0.06$) and substance abuse ($b= -0.05$) in Model 1 of Table 3. In Model 2, which controls for experiences in the child welfare system, having a physical or sensory related disability was significantly associated with a lower risk of homelessness ($b= -0.12$). This reduced risk persisted when controlling for service receipt in the transition to adulthood in Model 3, suggesting that the reduced risk is not a result of differential service access. However, in Model 2 and Model 3 of Table 3 having a physical or sensory disability was not significantly associated with incarceration or substance abuse, again indicating that the results in Model 1 may have been a result of variation in child welfare experiences and not an independent effect. Having a physical or sensory disability was not significantly associated with the risk of childbearing in any model.

3.1.3 Both Emotional or Mental and Physical or Sensory Disability

Having both an emotional or mental and a physical or sensory disability was significantly associated with a lower risk of homelessness and childbearing compared to having no disability when controlling for demographics (Model 1 of Table 3). When also controlling for child welfare experiences in Model 2 and for service receipt in Model 3, these results were largely upheld. Having both disabilities was associated with, on average, a nine-percentage point lower probability of experiencing homelessness and of having a child as seen in Model 3 of Table 3. Having both disabilities was largely not significantly associated with substance abuse or incarceration relative to having no disability, with the exception of Model 2 for substance abuse ($b=0.03$) where having both disabilities was moderately associated with a higher risk of substance abuse.

3.1.4 Other Disability

Having a disability categorized as “other disability” was not significantly associated with the risk of incarceration, homelessness, or substance abuse with any model specification. Having a disability which is categorized as “other” was significantly associated with a lower risk of childbearing in every model specification. Net of child welfare experiences and service receipt during the transition to adulthood, having a disability categorized as “other” was associated with a seven percentage-point lower probability of reporting childbearing.

3.1.5 Predicted Probabilities

Using Model 2 in Table 3, the predicted probability of experiencing incarceration, homelessness, childbearing, and substance abuse was calculated for each disability type. These predicted probabilities are plotted in Figure 1. The confidence intervals of the estimates are illustrated with bars and non-overlapping bars indicate significantly different estimates. Those with emotional or mental related disabilities had the highest predicted probabilities of incarceration, homelessness, and substance abuse. Those with sensory or physical disabilities had the lowest predicted probabilities of incarceration, homelessness, and substance abuse.

4.1 DISCUSSION

This study has several key contributions to the literature; it identifies having an emotional or mental disability as particularly risky in the transition to adulthood, suggests that some of this risk stems from deleterious experiences in foster care and with CPS, and finds that having a physical or sensory related disability is not in fact associated with difficulty in the transition to adulthood relative to having no disability.

The inferential analyses in Table 3 find that those with emotional or mental related disabilities face increased risk of reporting incarceration and homelessness when controlling for demographic characteristics. It is particularly important to target those with emotional or mental disabilities with services before and during the transition to adulthood to try and mitigate risks. Policy makers and practitioners should consider these risks when developing funding priorities, designing interventions to support foster care youth transitioning to adulthood, and when thinking about these social problems more broadly.

Interestingly, the higher risk of experiencing homelessness associated with having an emotional or mental disability is not significant at the 95% level when controlling for child welfare experiences. This suggests that the increased risk associated with having this type of disability may be a result of the difficult experiences they have during foster care and with CPS and perhaps not a feature of having an emotional or mental disability in and of itself. It is also interesting that controlling for which services youth receive during the transition to adulthood does not change the pattern of the relationships between disability and the indicators of risk. However, controlling for child welfare experiences does, again pointing to foster care as an important intervention point in the child welfare system to support the later transition to adulthood for youth with disabilities. Intervention earlier in the child welfare system may hold promise to reduce risk into adulthood for youth with disabilities.

It is important to note that a higher proportion of youth with emotional and mental disabilities do experience incarceration and homelessness during the transition to adulthood even if both of these risks are not necessarily independent associations resulting from having a disability. It seems that these risks may be due to the increased difficulties these youth face in their earlier experiences in the child welfare system. Figure 1 details the predicted probabilities of experiencing incarceration, homelessness, childbearing, and substance abuse for those without any disability, with an emotional or mental disability, with a physical or sensory disability, with both types of disabilities, or with a disability classified as “other” using the specification of Model 2 in Table 3. Even if some of these differences are not independently statistically significant, a higher proportion of those with emotional or mental disabilities are expected to experience incarceration, homelessness, and substance abuse in the transition to adulthood. More than a third of youth with emotional or mental disabilities are expected to experience incarceration ($p=0.34$) and homelessness ($p=0.37$), a quarter are expected to have a child ($p=0.25$), and nearly a quarter are expected to have substance abuse issues ($p=0.23$).

Qualitative literature suggests that there is not adequate support or training for foster parents in regard to disability and supports the finding that youth with these types of disabilities have more difficult experiences during foster care (Geenen & Powers, 2007). Additionally, youth with disabilities have more placements than youth without, and the number of placements that a youth experience is significantly associated with success after foster care (Fisher, Burraston, & Pears, 2005; Rubin et al., 2004). This suggests that to boost success in the transition to adulthood for youth with emotional and mental disabilities, efforts should be aimed at improving the ability of the foster care system to serve youth with emotional or mental disabilities.

While the transition to adulthood for youth with emotional or mental related disabilities is marked by areas of risk, having a physical or sensory disability is either not associated or is negatively associated with the dependent variables in the study, meaning those with physical or sensory disabilities face similar or less risk than those without disabilities. This suggests that researchers and practitioners need to view the transition to adulthood quite differently for youth with different types of disabilities. Some of the existing literature discusses youth with disabilities broadly, lumping those with emotional or mental disabilities and those with physical or sensory disabilities together. However, this study shows that these youth face very different risks and suggests that the mechanisms behind these risks are unique to the different disabilities. Moreover, the results examining the association between emotional or mental and physical or sensory disabilities and the outcomes are either not associated (substance abuse) or associated with lower risk (incarceration, homelessness, and childbearing). Therefore, looking at combined disability types may be obfuscating the risk associated with having a mental or emotional disability.

4.2 Implications

This study has a few implications for policy, practice, and research. The results of this study suggest that programs aimed at supporting youth during their involvement in the foster care system should be prioritized for funding and expanded. This is especially true for

programs or services which are specifically designed for those with emotional or mental related disabilities, who face unique risks in the transition to adulthood which may result from experiences within the child welfare system. Examples of potential programs which could be evaluated include the use of Educational Surrogates to help foster families navigate the special education and accommodation system and expanded training or mentoring for foster families with children with disabilities. Future research should focus specifically on service receipt, exploring which services may reduce the risk for this population and looking at service receipt at different time points in the progression through the child welfare system.

Interestingly, having a disability was largely associated with less risk of childbearing during the transition to adulthood compared to those without a disability. This is true for nearly all disability types, as seen in Figure 1. Additional analyses, not included here but available by request, showed little difference in this pattern by gender. While overall the predicted probability of childbearing was substantially larger among female children compared to male children, in both cases the predicted probability of childbearing for those with disabilities was similar or lower compared to the predicted probability among male and female alumni of the foster care system without a disability.

Future research should examine why youth with disabilities face less risk in this area, as well as explore how those with disabilities who do experience childbirth during the transition to adulthood fare compared to those without disabilities. Teen childbearing is an important life course event which has implications for the success and trajectory of both mother and child (Wu & Wolfe, 2001). It is possible that those with disabilities may face lower risk of childbearing during the transition to adulthood but more risk if they do in fact have a child (including the risk of multigenerational involvement with the child welfare system). Alternatively, perhaps the resiliencies that help youth with disabilities avoid the risk of childbearing during the transition to adulthood would also buffer them to risk while navigating childbearing. This is an area that would be both important and fruitful for future research to explore.

4.3 Limitations

Despite these important implications, there are few limitations to consider. The response rate for NYTD is quite low which limits the generalizability of these results. Although response rates for this population are always quite low, it is likely that the most disadvantaged youth who struggle the most in the transition to adulthood are excluded from this sample due to nonresponse. For example, someone who is currently incarcerated or who is no longer receiving any services and does not have a pathway of communication might not be included (such as those without a phone, internet access, or stable housing). It is important to note, however, that previous analyses which are weighted for NYTD non-response and which are not weighted produce similar results (Children's Bureau, 2014). The NYTD data are also partially self-reported data, meaning that desirability bias may play a role, leading to the under estimation of some vulnerable outcomes (such as incarceration, homelessness, or substance use).

Another important limitation to consider is the use of administrative data. While providing a unique national perspective, administrative data provides breadth at the loss of depth.

For example, the service use categories are broad, and I am not able to parse the data to look at specific programs within groupings. Additionally, these measures are collected by a wide range of staff members in different facets of the child welfare system, which introduces the threat of inconsistencies in data collection or measurement. Returning to our service use example, in this case the educational support services in one state could be a very different level of intervention or involve different participation levels in another state. Another consideration is that the outcome variables are binary, meaning they are a very granular measure of incarceration, homelessness, substance abuse, and childbearing. There may be differences related to the level of exposure to these risks, such as repeat spells of homelessness or incarceration, the number of children born, and the chronicity of substance abuse issues, which are lost in these analyses due to the granularity of measurement available in these data.

These data also rely on an accurate diagnosis of disability for those in the foster care system. While the estimates here are similar to other published estimates using different samples (Lightfoot et al., 2011; E. Slayter, 2016), it is important to consider the potential barriers that youth in the child welfare system may face in accessing healthcare to receive a diagnosis and the potential stigma they face which may increase the likelihood of receiving a diagnosis (especially an emotional or mental disability diagnosis). Regardless of these potential factors which may act as barriers to diagnosis or even may present an increased risk of inaccurate diagnosis, this study examines how disability diagnosis shapes risk in the transition to adulthood which is likely a good proxy for disability. Despite these limitations, the results of this study provide important insight into this crucial transition for a highly vulnerable population.

4.4 Conclusion

Having an emotional or mental disability is particularly risky in the transition to adulthood, and this risk, in part, stems from deleterious experiences in the child welfare system. Moreover, this study finds that having a physical or sensory related disability is not in fact associated with difficulty in the transition to adulthood relative to having no disability. Future research should examine how the foster care and CPS histories of youth with an emotional or mental disability and with a sensory or physical disability vary from each other and from youth without disabilities. Disability-specific interventions and services are needed. Experiences in foster care and with CPS account for some of the variation in outcomes, indicating that policy makers and practitioners should focus on those stages of system involvement when seeking to improve outcomes in the transition to adulthood for youth with disabilities who age out of foster care.

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Highlights

- Disabled youth who age out of foster care face risk in transition to adulthood
- Youth with emotional/mental disabilities have a higher probability of incarceration
- Youth with emotional/mental disabilities are more likely to experience homelessness
- Child welfare experiences account for increased risk of homelessness
- Youth with physical/sensory disabilities are less likely to experience homelessness

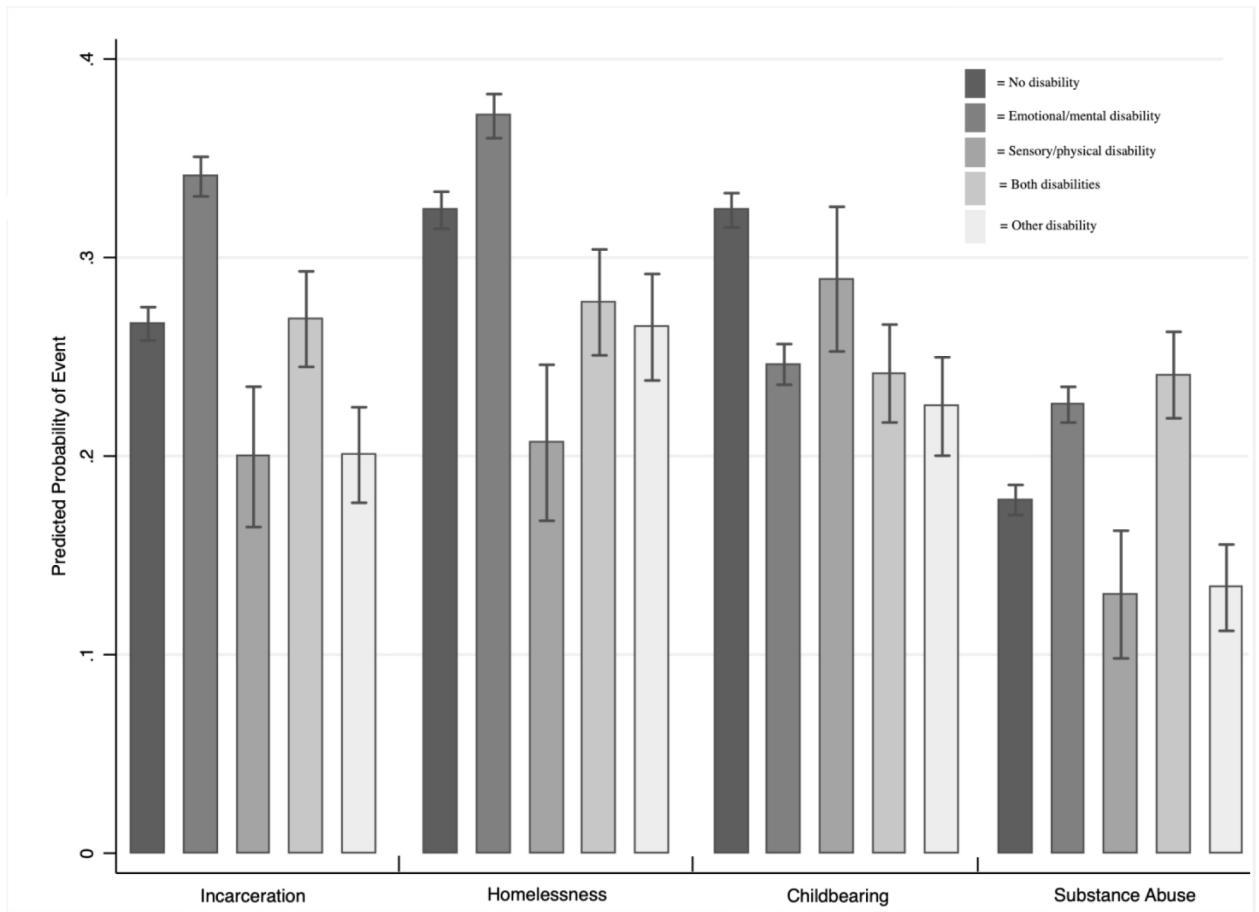


FIGURE 1. PREDICTED PROBABILITIES OF EXPERIENCING INCARCERATION, HOMELESSNESS, CHILDBEARING, AND SUBSTANCE USE FOR THOSE WITHOUT ANY DISABILITIES, THOSE WITH EMOTIONAL OR MENTAL DISABILITIES, THOSE WITH PHYSICAL OR SENSORY DISABILITIES, THOSE WITH BOTH TYPES OF DISABILITIES, AND THOSE WITH OTHER DISABILITIES.

Notes. Predicted probabilities based on Model 2 in Table 2, includes controls for demographics, foster care experiences, and cps history.

Table 1.

Descriptive table with sample means or proportions.

	Mean/Proportion	Std. Error.
Any Disability	0.45	
Emotional or Mental Disability	0.33	
Physical or Sensory Disability	0.03	
Both Disabilities	0.04	
Other Disability	0.06	
Demographics		
Male	0.40	
Race		
NH-White	0.45	
NH-Black	0.32	
Hispanic	0.18	
Other	0.05	
Urban/Rural Status		
Urban Metro	0.81	
Urban non-Metro	0.17	
Rural	0.02	
Foster Care Experiences		
Number of Placements	6.97	0.01
Number of Removals	1.28	0.01
Days in Foster care	1762	22.60
Age when Entered	12.55	0.07
Ever adopted	0.07	
Medicaid	0.98	
SSI/SSDI	0.14	
Marital Status of Caretakers at Removal		
Married Couple	0.23	
Unmarried Couple	0.13	
Single Parent	0.55	
Other/Not Determined	0.09	
Removal Reason		
Parent Related Risk	0.24	
Child Related Risk	0.29	
Abuse	0.26	
Neglect	0.49	
Other	0.31	
Child Protective Histories		
Number of CPS reports	3.15	0.04
Number of victimizations	1.08	0.02
Abuser is Parent	0.33	

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N: 5221. Disability data is from AFCARS, NH is non-Hispanic, SSI is Supplemental Security Income and SSDI is social security disability insurance, CPS is child protective history.

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Table 2.

Descriptive table with sample means/proportions by disability status.

	No Disability	Disability
Demographics		
Male	0.39	0.48
Race		
NH-White	0.42	0.45
NH-Black	0.37	0.32
Hispanic	0.16	0.18
Other	0.05	0.06
Urban/Rural Status		
Urban Metro	0.80	0.82
Urban non-Metro	0.18	0.16
Rural	0.02	0.02
Foster Care Experiences		
Number of Placements	5.87	7.59
Number of Removals	1.43	1.55
Days in Foster care	1769.62	2260.11
Age when Entered	12.33	11.04
Ever adopted	0.07	0.09
Medicaid	0.97	0.98
SSI/SSDI	0.10	0.15
Marital Status of Caretakers at Removal		
Married Couple	0.24	0.22
Unmarried Couple	0.10	0.10
Single Parent	0.57	0.55
Other/Not Determined	0.08	0.13
Removal Reason		
Parent Related Risk	0.27	0.21
Child Related Risk	0.23	0.37
Abuse	0.26	0.22
Neglect	0.49	0.46
Other	0.29	0.33
Child Protective Histories		
Number of CPS reports	3.00	3.44
Number of victimizations	1.07	1.08
Abuser is Parent	0.36	0.26

Notes. N: 5221. Disability data is from AFCARS, NH is non-Hispanic, SSI is Supplemental Security Income and SSDI is Social Security Disability Insurance, CPS is child protective history, diff is difference. Means/proportions reported.

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Table 3.

The association between having a disability and social exclusion indicators for youth who transition out of foster care without a permanent placement using the linear probability models to adjust for demographics, child welfare experiences, and service receipt.

	Incarceration			Homelessness			Childbearing			Substance Abuse		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Emotional/ Mental Disability	0.05*** (0.01)	0.03* (0.01)	0.04** (0.01)	0.05** (0.01)	0.02 (0.02)	0.02 (0.02)	-0.04** (0.01)	-0.05*** (0.01)	-0.05** (0.01)	0.02+ (0.01)	0.01 (0.01)	0.02 (0.01)
Sensory/ Physical Disability	-0.06+ (0.04)	-0.05 (0.04)	-0.03 (0.04)	-0.14*** (0.04)	-0.12** (0.04)	-0.11** (0.04)	-0.02 (0.04)	-0.01 (0.04)	-0.00 (0.04)	-0.05+ (0.03)	-0.04 (0.03)	-0.04 (0.03)
Both Disabilities	0.01 (0.03)	0.00 (0.03)	-0.01 (0.03)	-0.08* (0.03)	-0.09** (0.03)	-0.09** (0.03)	-0.09** (0.03)	-0.09** (0.03)	-0.09** (0.03)	0.04 (0.02)	0.03+ (0.03)	0.04 (0.03)
Other Disability	-0.03 (0.03)	-0.020 (0.025)	-0.01 (0.03)	-0.05 (0.03)	-0.03 (0.03)	-0.02 (0.03)	-0.09** (0.03)	-0.07** (0.03)	-0.07** (0.03)	-0.03 (0.02)	-0.02 (0.02)	-0.02 (0.02)
Demographics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Child Welfare Experiences	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Service Receipt	No	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes
<i>N:</i>	5,215			5,221			5,218			5,218		

Notes. Data are linked administrative data (NYTD, AFCARS, & NCANDS). Comparison group for disability is those without disabilities. N change due to missing data in outcomes.

*
p<0.05

**
p<0.01

p<0.001.