

Placement Instability and Risky Behaviors of Youth Aging Out of Foster Care

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Published online: 8 September 2011
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Abstract Youth who age out of foster care are at risk of poor outcomes and risky behaviors in young adulthood. Yet, little is known about what child welfare workers can do to decrease these risks. The effect of foster care placement instability on substance use and risky sexual behaviors is examined using data from 114 young adults who aged out of care. When controlling for variables commonly associated with these behaviors, a history of foster care placement instability increased the young adults' likelihood to use substances. Child welfare practitioners could potentially reduce the vulnerability of this population by providing them greater stability during adolescence.

Keywords Foster care youth · Aging out · Placement stability · Substance use · Risky sexual behaviors · Foster care · Young adult outcomes

Youth who age out of foster care are at an elevated risk of negative outcomes in young adulthood. Risky sexual behaviors and substance use are among the risk behaviors to which this population is susceptible and engagement in these risk behaviors can create pathways to further vulnerabilities. While there is a collection of research regarding these risk behaviors among adolescents and young adults in the general population, there is little evidenced-based knowledge as to the unique factors that increase foster care youths' susceptibility to these behaviors in their transition to young adulthood. This study examines the role of placement instability while in foster care as one factor that could contribute to young adult risky behaviors.

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Review of Relevant Literature

Young Adults from Foster Care

In Fiscal Year 2009, an estimated 29,500 youth exited the foster care system due to emancipation or “aging out” (U.S. Department of Health and Human Services 2010). The Foster Care Independence Act of 1999 doubled the funding available to this population and some states allow young adults to remain in care or continue to receive some form of assistance from the foster care system up to the age of 21. However, in the 10 years since the passage of this act, the young adult outcomes of former foster care youth continue to be poor. Furthermore, the percent of the foster care population who age out of care continues to rise (Pew Charitable Trusts 2007) without sufficient increases in funding.

Research indicates that youth who age out of foster care face considerable adversity in young adulthood. With about half of youth aging out of care without a high school diploma, employment, financial stability, and housing security suffer. Indeed, up to half of young adults from foster care are unemployed at any given time; the income of the majority is below the poverty threshold; and up to 40% experience homelessness. Compounding these vulnerabilities, many engage in risky behaviors. One-third to one-half of former foster care young adults have been arrested and/or jailed; substance use is reported by about 25% with about 15% having substance abuse or dependence disorders; and between 40 and 60% have been pregnant or been the parent of a child (Barth 1990; Brandford and English 2004; Cook et al. 1991; Courtney et al. 2001, 2005, 2007; English 2003; Hughes et al. 2008; Mech and Fung as reported in Mech 2003; Pecora et al. 2005; Reilly 2003; Singer 2006; Williams et al. 2005).

The majority of youth who age out of foster care entered care as adolescents. Due to their relatively short time in care compared to the amount of their development they spent in their parent/guardian’s care, it is important to note that many factors may combine to make these youth multiply vulnerable during young adulthood. Youth entering foster care have been abused, neglected, and/or abandoned. Many were also exposed to poverty, parental substance abuse, violence in their homes and communities, and incarceration of a parent (Crosson-Tower 2007; Taussig 2002). These pre-foster care factors can increase the risk of foster care youth engaging in high risk behaviors.

However, their placement in foster care should also reduce some of their risks because they are removed from their high risk environments and are provided case management and services to address multiple needs such as mental health issues. Yet, it has not been demonstrated that this is sufficient. Indeed, there is some evidence that youth in foster care are more at-risk than other youth with similar histories and constellations of risk factors (Kortenkamp and Ehrle 2002; Mech 2003). Furthermore, in adulthood they fare no better than their non-foster care cohorts who remained in environments and families similar to those from which the foster youth were removed (Berzin 2008; Buehler et al. 2000; Kerman et al. 2002). The use of substances by this population both while in foster care and after aging out of foster care and their engagement in risky sexual behaviors illustrates their

continued risk despite the protective factors associated with removal from their high-risk families and environments. Placement instability, because of its impact on emotional development, identity formation, and acquisition of positive social networks, might be one factor in foster care which increases foster youths' risks.

Placement Stability Among Youth in Foster Care

Adolescents in foster care have higher rates of mobility than their younger cohorts (Wertheimer 2002; Wulczyn et al. 2003). This instability can be disruptive to their connections with others and sense of emotional and social well-being and (Stott and Gustavsson 2010). Prior movement is the best predictor of future movement and movement tends to perpetuate itself (Leathers 2006; Webster et al. 2000). Furthermore, if adolescents are not reunified with their parents/guardians, their most likely exit outcome from foster care is either aging out or running away (Maza 2009); only a relative few are adopted or placed in guardianships. Indeed, an adolescent's likelihood of being adopted is less than 5% (Wulczyn 2009) and one-quarter of these will disrupt (Festinger 2005).

Foster care placement instability has been shown to be problematic for adolescents in care. Low educational achievement, school drop-out rates, identity confusion, low self-esteem, drug use, juvenile arrest and incarceration rates, increased mental health care needs, and social network disruption have all been correlated with placement instability (Barber and Delfabbro 2003; Blome 1997; Herrenkohl et al. 2003; Johnson-Reid and Barth 2000; Perry 2006; Ryan et al. 2007; Salah-Din and Bollman 1994; Timberlake and Verdick 1987).

These conditions can interfere with the attainment of independent living skills and decrease the emotional and social competencies needed to be successful in the abrupt transition to independent living. Illustrating this, Cashmore and Paxman (2006) found that among Australian young adults from care, those with fewer placements had a greater sense of emotional security, more social support during young adulthood, and were overall faring better than those with more placements. Furthermore, although several studies have not been able to tease out whether placement instability drives problem behaviors or problem behaviors drives instability (Barber and Delfabbro 2003; Delfabbro et al. 2002; Dore and Eisner 1993; Newton et al. 2000), recent research has found that problem behaviors can be the outcome rather than the antecedent of movement (Rubin et al. 2007).

The emotional and social impact of continued movement has also been identified in several qualitative studies. Foster care youth and alumni have identified their instability as a major impediment to their willingness to form trusting relationships with others (Samuels 2008). They note the futility of forming relationships only to be moved and have those relationships broken (Kools 1999). Movement also perpetuates foster care stigma, because with each move, youth must again face the disclosure of their foster care status. Many youth note the loss of a sense of normalcy (Kools 1997; Unrau et al. 2008) as a result of being in foster care.

Some youth are moved without much notice and suffer additional losses with each move. They are not given the opportunity to say good-bye, they are not afforded with methods of keeping in contact with friends or natural mentors after the

move, important possessions and keepsakes are lost, and often-times moves disrupt visitation schedules with their parents and siblings and distance them from extended family. This can result in ambiguous loss, wherein youth internally grieve losses that are not socially recognized (Lee and Whiting 2007). Loss of a sense of control over their lives can also result. In response, many youth who are frequently moved become apathetic about their futures (Hyde and Kammerer 2009). This undermines their development of self-efficacy as was found in one study wherein it was noted that youth actively engaged in self-protection mechanisms including a lack of future planning (Kools 1999).

Thus, the coping skills often developed by youth in foster care whose placements are unstable are those of isolation, hopelessness, and ambivalence. These feelings can exacerbate prior traumas and lead to increased depression and anxiety, compounding the risk of engaging in risky behaviors. Being hesitant and distrustful of relationships can interfere with the maintenance of healthy and respectful intimate relationships and decrease youth's inclusion in positive social networks wherein risky behaviors are not condoned. Furthermore, when youth lack self-efficacy, they are less likely to be motivated to succeed in school and to resist engaging in risky behaviors that have long-term consequences such as substance use and unprotected and/or dis-empowered sex.

Substance Use and Abuse

Nationally, late adolescence and emerging adulthood are the age groups most prone to substance use and abuse (Johnston et al. 2009). While many young adults will experiment with drug use and binge on both alcohol and drugs during this phase, some young adults are more at risk than others of developing substance abuse disorders or continuing on trajectories of risky behaviors with negative consequences to their long-term physical and mental health. Although there has been no research that has examined the long-term substance use trajectories of youth aging out of foster care, it can assumed based on factors they have in common with other high risk groups that their use of substances in adolescence and young adulthood can place them on negative trajectories. They are less likely to fall within the benign group of substance use experimenters.

Adolescents in foster care seem to use substances at higher rates than their peers. In a study of 15–18 year-olds enrolled in a life skills program for foster care youth, 36% reported marijuana use in the past 6 months (Thompson and Auslander 2007). Whereas, the rates reported in 2006 Monitoring the Future data for high school sophomores and seniors are 25–32% for past year marijuana use (Johnston et al. 2009). Furthermore, the 2002 and 2003 National Survey on Drug Use and Health found that 34% of youth who had ever been in foster care had used illicit drugs in the past year whereas 22% of those who had not been in foster care used in the past year (SAMHSA 2005).

In addition to using at higher rates, adolescents in care also abuse substances at higher rates than their peers, as is evidenced by their higher rates of abuse and dependence disorders. More than one-third (35%) of a Missouri sample of transitioning youth met the diagnostic criteria for having had a diagnosable

substance use disorder at some time in their life (Vaughn et al. 2007). Ten percent of the 2000 National Household on Drug Abuse study participants who had ever been in foster care met the criteria for a past year drug dependence disorder while only 2% of those who had not been in care met the criteria (Pilowsky and Wu 2006).

In young adulthood, substance use by those who have aged out of foster care continues to be concerning. Twenty-four percent of Washington young adults who emancipated from foster care and were 18 and 19 years-old in 2003 used illicit drugs in the past 3 months and 9% reported use of those drugs on a weekly or more frequent basis (Brandford and English 2004). Of Alaskan former foster care young adults who were ages 19–28 in 2004, 26% used marijuana and hashish in the past 30 days (Williams et al. 2005). In a Massachusetts study, 34% of the young adults surveyed had used illegal drugs in the past 30 days (Hughes et al. 2008). A Missouri study of young adults who were 19 between 2003 and 2005 found that 20% had used marijuana, and 6% had used other drugs in the past 30 days (Narendorf and McMillen 2010). In contrast, the national rate of marijuana use in the past 30 days in 2004 among 18–25 year-olds was 16%; and the rate of other illicit drug use was 8% (SAMHSA 2004).

The rates of substance abuse and dependence disorders in samples of young adults from foster care are also disproportionate to the general population. Among the Missouri sample, at age 19, 15% had a substance use disorder or dependence disorder, a higher rate than the general population of young adults in Missouri (Narendorf and McMillen 2010). Twelve and a half percent of the participants in the Mid-West study who were 19 in 2004–2005 met the diagnostic criteria for a recent substance abuse or dependence disorder (Courtney et al. 2005). Whereas, in the years 2004–2005, past year illicit drug abuse or dependence disorders among 19 year-olds nationwide was 10% (SAMHSA 2005). The Northwest Study of Foster Care Alumni reports that between the ages of 20 and 32, 8% of their sample had symptoms of a drug-dependence disorder in the past year, while only 1% of a similarly aged group who participated in the National Comorbidity Study expressed such symptoms (Pecora et al. 2005). Finally, a finding from a Nevada study of young adults from foster care was that 24% had supported themselves by selling drugs since they left foster care (Reilly 2003).

The literature has documented several factors which place general population adolescents at risk of developing substance abuse problems in their transition to young adulthood, namely low educational attainment, mental health problems, and poor social environments. Adolescents in foster care are disproportionately likely to fall within all these risk categories. Furthermore, Krohn et al. (1997) found that transitioning to complete independence from adolescence was associated with higher substance use in young adulthood. Yet, transitioning from highly structured environments to complete independence with little or no supports is the norm for many adolescents aging out of foster care.

A significant protective factor against substance use escalating to a substance abuse problem or dependence disorder is educational status (D'Amico et al. 2005; Schulenberg et al. 1994; White et al. 2005). Yet, foster youth are academically disadvantaged. Their high school graduation rates are much lower than their peers, they attend college at lower rates, and they are much less likely to graduate from

college than similarly aged young adults (Roper 2008). Foster youth are also more likely than their peers to be in special education classes, to be diagnosed with a learning disability, and to be held back a grade (Blome 1997; Burley and Halpern 2001; Rosenfeld and Richman 2003).

Placement instability has been identified as one of the greatest hindrances to foster youths' academic success (Burley and Halpern 2001). In one study, a quarter of 16–17 year-olds in foster care had changed schools five or more times due to placement changes, and 30% had missed a month of school or more due to a placement change (Shin and Poertner 2002). Among young adults formerly in foster care and case managed through Casey Family Programs, those who had experienced two or fewer placement changes per year were three times more likely to obtain a high school diploma (Pecora et al. 2006).

The large impact on educational attainment created by placement instability may be increasing the vulnerability of youth transitioning from foster care to use and abuse substances. Furthermore, social controls and social networks are disrupted with each move to a new placement, potentially decreasing youth's willingness to continue to seek out positive peers. The values and norms regarding substance use change with each placement, as well. Emotional competencies and coping skills are further negatively influenced. Thus, youth who frequently move may be at a greater risk of developing substance abuse or dependence disorders in young adulthood than those who are able to find stability within a living situation, school, social network, and community.

Risky Sexual Behaviors

Young adults who have aged out of foster care, especially females, are more than twice as likely to engage in risky sexual behaviors as other young adults (Love et al. 2005). Although this has been well documented in outcome studies with this population, the pathways to these behaviors have not been identified nor have the protective factors which could help safeguard young adults against these risks.

Among young adults who had been in foster care in Alaska, 57% of females were pregnant by age 19 and 13% of males reported they had been responsible for a pregnancy (Williams et al. 2005). Of the Midwest sample, almost half of the females were pregnant by age 19; 37% had been pregnant in the past 2 years; and of those, 18% had been pregnant more than once (Courtney et al. 2005). Among the Washington sample, about 40% of the females had experienced a pregnancy by age 19, and about 20% of the males had impregnated a female (Brandford and English 2004). Lastly, of the 100 youth who participated in a Nevada study, 70 pregnancies had occurred and 38% had children by age 21 (Reilly 2003).

The high pregnancy rates in young adulthood among this population mirror their higher than average teen pregnancy rates. Prior to exiting care, 33% of the Midwest sample of adolescent females had been pregnant, and this was significantly greater than the pregnancy rate of the Adolescent Health national sample of 19% (Courtney et al. 2004). Similarly, 29% of the Washington sample had been pregnant by age 17 (English 2003). Finally, according to Missouri administrative records, 20% of females and 38% of minority females who were discharged from care due to

emancipation were pregnant or parenting at the time of their discharge (McMillen and Tucker 1999).

The higher than average rates of teen and young adult pregnancy among female foster youth are indicative of risky sexual behaviors. In one of the few studies that has explored foster adolescent sexuality, the foster care status of females was associated with both a younger age of first consensual intercourse and having more than the median number of sexual partners than the non-foster care comparison group (Carpenter et al. 2001). Furthermore, after leaving care, only 27% of females in the Midwest study used condoms during intercourse consistently in the past year. While little is known about the phenomenology of high pregnancy rates and the sexual decision making of young adults from foster care, what is clear is that they seem especially vulnerable to engage in risky sexual behaviors.

Factors associated with risky sexual behaviors in adolescence include a history of child sexual abuse, substance use, weak family attachments, low social capital, poor interpersonal well-being including low self-esteem, a decreased internalized locus of control, a diminished sense of opportunity, and being an ethnic or racial minority (Berry et al. 2000; Cunningham et al. 1994; Driscoll et al. 2005; Moore and Florsheim 2001; Rosenthal et al. 1999; Young et al. 2001).

Adolescents in foster care are highly vulnerable to these risk factors; and placement instability may compound or create some of these risks. Youth in foster care have higher than average rates of childhood sexual abuse. For example, 51% of transitioning youth in Washington had been sexually abused (English 2003). The Washington study (Brandford and English 2004) also showed that relative to youth in foster care without histories of sexual abuse, those who had been the victim of sexual abuse were significantly more likely to have been pregnant or parenting by age 19. Due to their maltreatment history, youth in foster care need increased access to consistent relationships with caring adults and to consistent messages about sexuality. However, placement instability can interfere with both of these.

Placement instability also negatively affects youths' self-efficacy, and self-esteem; in addition, social capital and inclusion in positive social networks is likely diminished. A focus group conducted with foster youth in the Chicago area (Love et al. 2005) illustrated that foster youth often feel estranged from warm and enduring relationships and that they feel they cannot connect with anyone because they are in a constant state of flux. Many youth revealed that they lacked the motivation to avoid becoming pregnant because they wanted to fill relational voids in their lives. The combination of risk factors associated with youth in foster care increases their likelihood of engaging in risky sexual behaviors which places them at risk of contracting sexually transmitted infections and diseases, and of early pregnancy and parenthood. Placement instability may be compounding these risks.

Methodology

The primary research question was: is there a relationship between foster care placement stability and substance use and risky sexual behaviors in young adulthood? This research was approved by the university's Institutional Review

Board and by the Human Subjects Review Committee of the state's Division of Children, Youth, and Families.

Recruitment and Sample

Recruitment packets were mailed to the last known address of young adults who turned 18 between July 1, 2004 and June 30, 2008, while in the legal custody of the state's Child Protective Services (CPS). The population of eligible participants included 2,045 young adults. Of these, 214 had no last known address and 601 recruitment packets were returned as undeliverable. The recruitment packets consisted of a one page flyer, a recruitment letter, an informed consent/enrollment form, a decline form, and a resource directory. Young adults were offered a \$10 gift card for returning either the enrollment form or decline form and a \$45 gift card for participating in a telephonic interview. Secondary recruitment strategies were also utilized including a snow-ball sampling question within the interview schedule, networking with community agencies providing services to youth and young adults, advertising at meetings and events for youth and young adults associated with foster care, advertisement posters placed at young adult homeless shelters and young adult centers, and working with state independent living providers to obtain current addresses of young adults recently discharged or still receiving services.

Ten young adults returned a decline form and 183 young adults enrolled in the study. Of those who enrolled, two later withdrew and contact was lost with another 48. One hundred twenty three young adults were interviewed. Nine interviews were excluded because the participants did not meet the sampling criteria (e.g., issues arose pertaining to English comprehension, mental illness, developmental disabilities, and not having aged out of foster care during the sampling time frame). The final sample consisted of 114 interviews, seven of which were incomplete. The interviews took place between July 2007 and December 2008, when the young adults were between the ages of 18 and 21. They lasted between 45 min and an hour and a half. Interviews were taped when the young adult consented.

Description of Measures

The interviews were administered following an electronic interview instrument. Both quantitative and qualitative questions were asked. In the substance use section, participants were asked about alcohol, marijuana, methamphetamines, cocaine, ecstasy, other club drugs (e.g. GHB, Rohypol, Ketamine), heroin, psychedelics, inhalants (e.g. gas, glue, spray paint, Freon), prescription drugs in order to get high (e.g. Oxycotin, Valium, Xanax, Ritalin, Vicodin, asthma medicine), steroids, and over-the counter drugs in order to get high (e.g. Robitussin, Nyquil, and cold medicine with coricidin). For each substance, participants responded to whether they had ever used the substance, if so the last time they had used it; and the frequency of their use. When the substance was first introduced, slang words and street names were also used to describe the drug.

The sexual behaviors domain included questions about if they had ever had consensual sexual intercourse, how old they were the first time, the number of

partners they had in their lifetime, and the number of partners they had in the past 3 months. Those who had at least one consensual partner in the past 3 months were asked about the frequency of condom use in the past 3 months; and if they had vaginal sex in the past 3 months, the frequency of other contraceptives such as birth control medicine (pill, patch, Norplant sticks, Dep-Provera shot) and other female barrier methods such as a diaphragm, cervical cup, or IUD. Participants were also asked about pregnancies and the number of children they were parenting. Sexual intercourse was defined as penile penetration of the vagina or anus. Participants were asked to exclude sexual experiences that were not their choice (not consensual) or that were solely oral sex, finger sex, or fondling.

Placement history was extracted from administrative files. The participants' placement types were coded and counted. Each placement, regardless of placement type, was considered a change in placement. Twenty-five of the young adults had at least one re-entry into care. The independent variable used in the analysis, number of placements, was the number of lifetime placements each participant had until the age of 18. The placements of young adults still in voluntary foster care past the age of 18 were excluded. Placements included in this lifetime number were shelter, foster home (all levels) group home (all levels), unlicensed relative, unlicensed non-relative, residential treatment, hospitalization, detention or corrections, and runaway status. While the last few placement types listed are not foster care placements per se, these placement types are included in the counts recorded in the federal Adoption Foster Care Reporting System and were, therefore, included here. Furthermore, each of these changes still resulted in changes in the youths' social environments.

Control variables were used in the regression analyses in order to control for the effect of adverse experiences commonly associated with poor mental health and risky behaviors. Furthermore, the control variables helped to diminish the effect of pre-foster care experiences on the young adult outcomes. The adverse experiences control variables were parental substance abuse, parental domestic violence, parental extreme poverty (not enough money for food or shelter), parental incarceration, neglected, physically abused (before or during foster care), sexually abused or assaulted (before or during foster care), and intimate partner violence before age 18. Each of these variables was a dichotomous variable noting either the presence (one) or absence of the experience (zero). The effects of sex (one is female and zero is male) and race (one is racial/ethnic Minority and zero is White) were also controlled because these variables are related to substance use and risky sexual behaviors.

Results

Placement Stability

The demographic characteristics of the participants are displayed in Table 1. The placement histories of the young adults varied widely. One young adult was continuously in care from the age of two until eighteen, while another young adult

Table 1 Demographics of participants

Variable	Frequency	%
Sex		
Female	83	72.8
Male	31	27.2
Race/ethnicity		
Black	10	8.8
Hispanic (White)	42	36.8
Native American	2	1.8
White (non-Hispanic)	55	48.2
More than one	5	4.4
Age		
18	62	54.4
19	36	31.6
20	9	7.9
21	7	6.1
Sexual orientation ^a		
Straight	89	82.4
Bi-sexual	14	13.0
Lesbian/gay	5	4.6
Missing	6	NA

N = 114 unless otherwise notated

^a *n* = 108

did not enter care until 2 weeks before his 18th birthday. The mean age of first entry into foster care was 14-years-old. The number of placements each young adult had before the age of 18 ranged from 1 to 38 with a mean lifetime number of placements of 8.02 and a mean number of placements since the last entry of 7.29. Almost one-fifth (19.3%) of the sample had 12 or more placements. On average, since the last entry into care, the young adults changed placements, every 6 months. Table 2 is a representation of the placement histories of the young adults included in the sample and Fig. 1 provides a depiction of the number of lifetime foster care placements.

Substance Use

Seventy-six percent (83, *n* = 109) of the young adults had ever used any drug or been intoxicated. About a quarter (24.8%, 27, *n* = 109) had used drugs or been drunk in the past 30 days, and almost two-fifths (38.4%, 38, *n* = 99) had used drugs or been drunk in the past 6 months. About one-third (32.3%, 32, *n* = 99) had used any drug, been drunk, or used any combinations of drugs and intoxication at least once a month or more in the past 6 months and a little over one-fifth (21, 21%, *n* = 99) were using substances at a frequency of weekly or more. The most frequently used substances were marijuana and alcohol intoxication. Table 3 illustrates the percentages of the young adults who ever used each substance, those who used in the past 30 days, those who used each drug in the past 6 months, and the mean frequency of their use of drugs and drinking to intoxication in the past 6 months. The substance use variable is based on the total frequency of intoxication

Table 2 Placement demographics

Placement variable	Range	<i>M</i>	SD	Median
Lifetime number of placements	1–38	8.02	6.61	6.00
Average number of days in each placement	1–3815	149.54	301.11	56
Age at first placement	2.09–17.96	14.27	3.71	15.53
Age at last entry	2.09–17.96	15.14	2.97	15.95
Number of placements since last entry	1–38	7.29	6.44	6.00
Average yearly change rate for placements during last entry	.04–2.32	.49	.43	.36

Note. *N* = 114. All placements which began on or after the participant’s 18th birthday were excluded

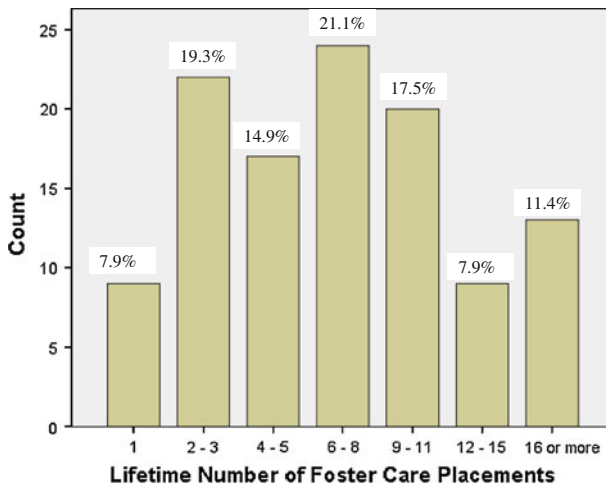


Fig. 1 Bar graph depicting the lifetime number of foster care placements

and drugs used in the past 6 months. Table 4 outlines the frequencies and percentages for each rate of use in the scale.

Sexual Behaviors

Of the 107 participants who responded to the questions in the sexual behaviors section, 88.8% (95) had ever had consensual sexual intercourse and 68% (73) had consensual sexual intercourse in the past 3 months. Almost a quarter (23.6%, 17, *n* = 72) used condoms every time they had sexual intercourse in the past 3 months, while almost half (45.8%, 33, *n* = 72) never used condoms. Of those who had vaginal sexual intercourse in the past 3 months, 30% (21, *n* = 70) used forms of birth control other than condoms (i.e. pharmaceutical contraceptives, IUD, cervical cup, diaphragm) every time they had sex and almost half (54.3%, 38, *n* = 70) never used other forms of birth control. Twenty- four percent had ever had a sexually transmitted infection or disease. Of the 73 who had intercourse in the past 3 months,

Table 3 Percentage and mean frequency of use of each substance within the past 30 days and past 6 months

Substance	Percent ever used (<i>f</i>) ^a	Percent used in past 30 days (<i>f</i>) ^a	Percent used in past 6 months (<i>f</i>) ^b	Mean frequency of use during past 6 months (SD) ^{b,c}
Drunk	44.0 (48)	18.3 (20)	24.2 (24)	2.10 (1.21)
Marijuana	67.0 (73)	11.0 (12)	25.3 (25)	3.41 (1.62)
Methamphetamines	33.9 (37)	0 (0)	3.0 (3)	4.00 (1.00)
Cocaine	25.7 (28)	2.8 (3)	5.1 (5)	1.25 (.50)
Ecstasy	15.6 (17)	.9 (1)	4.0 (4)	1.00 (–)
Club drugs	5.5 (6)	0 (0)	0 (0)	–
Heroin	9.2 (10)	.9 (1)	2.0 (2)	3.50 (2.12)
Psychedelics	17.4 (19)	0 (0)	2.0 (2)	–
Inhalants	11.9 (13)	0 (0)	2.0 (2)	5.00 (–)
Prescription drugs	22.0 (24)	2.8 (3)	4.0 (4)	3.00 (1.83)
Steroids	.9 (1)	0 (0)	0 (0)	–
Over-the-counter drugs	17.4 (19)	.9 (1)	1.0 (1)	5.00 (–)
Total used any drug	69.7 (76)	13.8 (15)	26.3 (26)	–
Total drunk or used any drug	76.1 (83)	24.8 (27)	38.4 (38)	–

Note. Dashes indicate that this information is not applicable

^a *n* = 109. Five interviews were incomplete at the time of the substance use section

^b *n* = 99. The initial 10 participants were not asked about past use

^c Frequency of use scale is: 0: none or less than once a month; 1: once a month; 2: 2–3 times a month; 3: once a week; 4: 2–4 times a week; and 5: almost every day

Table 4 Substance use scale

	Frequency of total use of drugs and intoxication in past 6 months	Frequency	%
	None or less than once a month	67	67.7
	Once a month	8	8.1
	2–3 times a month	3	3.0
	Once a week	3	3.0
	2–4 times a week	4	4.0
	Almost every day	14	14.1

n = 99

82% (60) had one partner during that time. Of the females in the sample, 53.3% (41, *n* = 77) had ever been pregnant and 18% of the females were currently pregnant.

The risky sexual behaviors variable is a scale variable based on the number of partners, the frequency of condom use, and the frequency of other forms of birth control. In the scale, zero represents no risk (no consensual sex in the past 3 months), one represents very low risk (one partner in the past 3 months and used condoms every time), and five represents very high risk (they had five or more

Table 5 Frequency of condom use and other forms of birth control in past 3 months

Frequency	Condom use ^a		Other forms of birth control ^b	
	Frequency	%	Frequency	%
Every time	17	23.6	21	30.0
More than half the time	9	12.5	6	8.6
About half the time	7	9.7	2	2.9
Less than half the time	6	8.3	3	4.3
Never	33	45.8	38	54.3

^a $n = 72$; ^b $n = 70$. Two people did not have vaginal intercourse and, therefore, did not answer this question

Table 6 Risky sexual behaviors scale

Score	Frequency	%
0 (no risk)	34	32.1
1 (least risky sexual behaviors)	17	16.0
2	5	4.7
3	12	11.3
4	5	4.7
5 (most risky sexual behaviors)	33	31.1

$n = 106$

partners, they never used condoms, they never used other forms of birth control, or they were currently pregnant). Table 5 outlines the participants' use of condoms and other forms of birth control while Table 6 details the frequencies and percentages in the risky sexual behaviors scale.

Adverse Experiences

As would be expected of young adults from foster care, the participants in this sample had experienced multiple adversities in their childhood and adolescence. Indeed, only three participants did not affirm any of the traumas or experiences in Table 7. This table lists the percentages and frequencies of the young adults who had experienced each of the adversities.

Tests of Hypotheses

Linear regression analyses were run to determine the relationships between placement stability and the risky behaviors while controlling for the adversity variables. The unstandardized regression coefficients and Beta coefficients of the outcome variables regressed on the independent variable, placement number, are presented in Table 8.

Table 7 Trauma history

Trauma or situation	Frequency	%
Parent/guardian abused drugs or alcohol	74	68.5
Domestic violence in parent's/guardian's home	68	63.0
Parent/guardian did not have enough money to meet family's basic needs like food and shelter	64	59.3
Parent incarcerated at any time during participant's lifetime	70	64.8
Neglected by parent/guardian in that they did not provide basic food, shelter, or medical care	53	49.1
Physically abused or purposefully injured by parent/guardian or anyone in the foster care system	63	58.3
Sexually abused, assaulted, or raped by anyone before age 18	54	50.0
Intimate partner violence in own relationship before age 18	23	21.3

$n = 108$

The regression analyses illustrate that when controlling for sex, race/ethnicity, parental substance abuse, parental domestic violence, parental poverty, parental incarceration, neglected, physically abused, sexually abused, and intimate partner violence before the age of 18, there is a statistically significant relationship between foster care placement instability and substance use, as hypothesized. As the number of placements each young adult had increased, their substance use score also increased. However, contrary to hypothesis, when controlling for the adversity variables, the relationship between placement instability and risky sexual behaviors did not reach the .05 level of significance.

Discussion

Compared to young adults ages 18–25 in the same state in 2007, the young adults in this sample were less likely to have used drugs in the past 30 days, but were more likely to have abused drugs in that they used at higher frequencies. Past month marijuana use by the state's young adult general population was almost 15% whereas 11% of this sample used marijuana in the past 30 days. Similarly, 14% of this sample used any drug in the past 30 days, yet almost 21% of the general population of the state's young adults used illicit drugs in the past 30 days (SAMHSA 2007).

While this study did not measure illicit drug and/or alcohol abuse or dependence according to DSM definitions, it can be assumed that for most young adults, daily use would constitute a drug abuse disorder. Twelve percent of the sample had used any one drug or combination of drugs on a daily basis in the past 6 months. However, only 7.3% of the state's general population young adults had an illicit drug abuse or dependence disorder (SAMHSA 2007). This is similar to other studies which have found that when this population uses, they are more likely to develop substance abuse problems (Narendorf and McMillen 2010).

Table 8 Outcome variables regressed on the independent variable

Dependent variable	Substance use ^a	Risky sexual behaviors ^b
	<i>b</i> (<i>SE</i>)	<i>b</i> (<i>SE</i>)
Sex	-1.52** (.39)	.35 (.51)
Race/ethnicity	-.24 (.33)	-.33 (.41)
Parental drug abuse	.04 (.43)	-.39 (.54)
Parental domestic violence	.84 ⁺ (.43)	-.06 (.550)
Parental poverty	.08 (.38)	.01 (.46)
Parental incarceration	.99** (.37)	.40 (.44)
Neglected	.27 (.36)	.07 (.44)
Physically abused	-.48 (.41)	-.33 (.53)
Sexually abused	-.70 ⁺ (.37)	.47 (.48)
Intimate partner violence before 18	1.52** (.45)	1.16* (.53)
Foster care placements	.06* (.03)	.06 ⁺ (.03)

^a $n = 98$; ^b $n = 106$

⁺ $p < .1$; * $p < .05$; ** $p < .01$

With respect to risky sexual behaviors, the participants in this sample had higher rates of pregnancies, were more likely to be parenting, had a younger age of sexual debut, and used contraceptives less frequently than young adults in the general population. The pregnancy rate among 18 year-olds in the state in 2007 was 10.5% and among 19 year-olds was 13.9% (Arizona Vital Statistics 2007). Among the female 18 year-olds in the study sample, 17.4% were currently pregnant and 22.2% of the 19 year-olds were currently pregnant. Among young adults nationwide, ages 18–20 in 2000, 6.6% were living with their own children (Jekielek and Brown 2005), whereas 20% of the young adults in this sample were living with their own children. A higher percentage of the 18 and 19 year-olds in this sample had ever had sexual intercourse, as well. According to the 2002 National Survey on Family Growth, 70.6% of 18–19 year-olds had ever had sex (Centers for Disease Control 2009), whereas 84.7% of the sample had ever had consensual sex. The age of first sexual intercourse was also younger among the study sample with 54.4% of the sample having had consensual sexual intercourse for the first time at age 15 or

younger; whereas, 26–28% of the teens and young adults in the National Survey on Family Growth had sex before age 16 (Centers for Disease Control 2009). Finally, among 18–24 year-old sexually active young women in the state in 2002, 78% were using either birth control pills or shots and 36.6% of the young men were using condoms (Centers for Disease Control 2005), while only 27% of the study sample's sexually active young women were using any form of birth control other than condoms including all forms of pharmaceutical birth control at least more than half the time they had sex; and 29% of the of the sexually active young men were using condoms at least more than half the time they had sex. The participants in this study engaged in more risky sex than their peers.

Implications

This study points to important implications. Heretofore, placement instability has largely been associated with problem behaviors in foster care (Barber and Delfabbro 2003; Newton et al. 2000). Findings from this study indicate that placement instability is a contributor to substance use in young adulthood. Thus, the consequences and costs associated with placement movement can be long-term.

One notable consequence is that placement instability, above and beyond the adversity and high risk environments to which these young adults have been exposed, is increasing their likelihood to use and abuse substances. Young adults who were continually moved may be using substances to cope with feelings of disconnection and hopelessness. Furthermore, a history of frequent disruptions of significant relationships and social networks may lead young adults to lack the social skills to befriend other young adults not involved in high risk behaviors and therefore, only associate with other high risk groups. Peer's use of substances was identified as a significant predictor of young adult substance abuse in the Missouri study (Narendorf and McMillen 2010).

When making decisions about placement changes, child welfare workers will need to consider the impact of such changes on the overall well-being of youth including their academic success, connections with others, and access to positive social support networks. Oftentimes, moves are pursued in order to attempt to facilitate permanency, to move a youth away from a congregate care placement, or to place youth with relatives and/or siblings (Stott and Gustavsson 2010). While these moves can be positive and promote overall well-being, they can also sever important relationships, diminish youths' feelings of a sense of control over their lives, and leave youth feeling distrustful of relationships. Child welfare policies and practitioners need to approach placement movement with a balanced perspective. Some moves could be delayed until the end of a semester, and some moves could involve more preparation. Child welfare practitioners could be encouraged to facilitate youth in visiting their next placement and school, and in remaining in contact with friends and natural mentors associated with their former placements. Furthermore, youth need to be included as empowered participators in decisions about placement moves (Stott and Gustavsson 2010). When a youth is moved to a home she/he does not want to be in, for the sole purpose of reducing the number of children in congregate care, the risks of the movement, in terms of the youth

running away or developing an apathetic stance toward her/his future, may outweigh the benefit of having one less youth in a congregate care facility that month.

Youth in foster care are over-represented among at-risk youth populations due to having lived in families and environments characterized by poverty, violence, and/or substance abuse (Crosson-Tower 2007), yet the majority of the participants in this study were not using substances. Indeed, slightly over 60% had not used a drug or been drunk in the past 6 months. Knowing more about the factors which increases this population's resistance to substances and overall resilience is a second implication of this work.

Alternatively, when youth aging out of foster care do use substances, they are more likely to use at higher frequencies and be at-risk for developing substance abuse disorders than are their peers (Narendorf and McMillen 2010). As evidenced in this study, their use is less likely to fall within the category of experimentation. More research is needed which focuses on the trajectories of substance use among youth in foster care in order to tailor prevention efforts to this population.

Another implication from this research is the need for child welfare workers to attempt to reduce unplanned pregnancies and risky sex among this population. The rates of child bearing in every study on the outcomes of young adults from foster care far exceed population norms (Brandford and English 2004; Courtney et al. 2005; Reilly 2003; Williams et al. 2005). However, there is limited literature on the phenomenology of the sexual decision making processes involved in these outcomes. Future research could address youths' beliefs about sex, their understanding as to their access to contraceptives, and their degree of motivation to delay child bearing. The factors which influence their decision making in regards to sexual activity need to be identified so that risky decision making patterns can be interrupted.

The prevailing practices in foster care surrounding youth transitioning to young adulthood primarily concern themselves with skills training classes largely devoid of the relational exchanges through which most emerging adults develop self-sufficiency skills and emotional and social competencies. Although the acquisition of knowledge competencies related to independent living is necessary for this population, if members of the population do not have the emotional and social competencies necessary to act on the knowledge, they will probably continue to remain at risk. For example, youth can learn about birth control and condom use, but if they do not feel a sense of empowerment over their own lives or believe they can control their own destinies, that knowledge will not be sufficient to motivate them to use condoms and birth control during sexual activities. Placement instability may be one factor decreasing youths' feelings of self-efficacy.

Additionally, the largely political approach to this topic may also be increasing their risk. For example in the state where this study took place, policy states that in discussions with foster youth about sex, abstinence is to be stressed yet, other than this statement, there is no guidance to practitioners on how to educate and motivate youth in making fully informed and empowered sexual decisions (DCYF Policy Manual, n.d.). Nor are the rights of youth in regards to their reproductive health care decisions, especially if those decisions are contrary to the rules or values of their placement, fully explained.

Finally, an important, but unexpected finding that arose from the research was that experiencing intimate partner violence before age 18 was a statistically significant predictor variable of young adult risky sexual behaviors. Many youth in foster care do not have the ability to openly date or socialize due to rules that prevent them from having unsupervised time, riding in cars with unauthorized people, inviting boy/girlfriends to their placements, and/or going to friend's homes wherein there are adults who have not undergone background checks. The high incidence of youth affirming that they have experienced intimate partner violence as a teen and the effect that experience may have on their future sexual decision-making calls into question the policies that prevent youth from socializing in a manner similar to their peers. It is possible that many of the youth who had experienced intimate partner violence were in furtive relationships. This may have increased the likelihood that these relationships were unhealthy.

Limitations

This study has several limitations that bear mentioning. First, there is the possibility of selection bias that may limit the generalizability of the findings. A larger proportion of the study sample was receiving financial support from the foster care system than is the norm among young adults who leave care in the study sample state (44 vs. 29%). Due to the policy restrictions associated with receiving on-going financial support, those who receive this support are already faring better than those who are denied post-18 services; compounding this, the receipt of those financial services further bolsters them. For example, those receiving financial supports have greater resources for housing and education. The study sample having a higher percentage of participants receiving support than would be the norm for those turning 18 while in the custody of CPS may be skewing the results somewhat toward more favorable outcomes.

There was also a selection bias related to recruitment. Because the major recruiting effort was made through mailings to the last known addresses of the youth who had aged out, those who were more stable in young adulthood and/or maintained forwarding addresses with the post office were more likely to receive the recruitment packet than those who moved frequently or were homeless. This is evidenced by the fact that two-fifths of the eligible young adults had no valid address and thus did not have the opportunity to enroll in the study. Those receiving services from CPS were also more likely to have a valid address on file with the agency than those not receiving post 18 services, which is one reason they were over-sampled. The most vulnerable were likely not found. Although multiple efforts were made to locate potential participants through other means, a disproportionate few enrolled through self-referral.

The fact that the participation rate was only 6% is another important limitation in regards to sampling. It is unknown if the participants were representative of the population of young adults who aged out of care in this state. This is a problem in several studies with this population (Hughes et al. 2008; Reilly 2003) due to the difficulty of finding the young adults once they leave foster care. This is likely another indicator of their lives being unstable. The most recent successful study in

this regard, the Mid-West study (Courtney et al. 2001), was able to enroll the youth prior to leaving the state's care and inquire of them about the people in their lives who would always know where they were. Due to the protections in place for youth currently in care, the legal requirements necessary to enroll youth in a study who are in the state's custody, and the resources necessary to keep track of the youth as they transitioned to young adulthood and disengaged from the child welfare system, this recruitment strategy was not an option for this study.

Operationalizing substance use and risky sexual behaviors is another limitation, in that these constructs are defined differently across studies and there is no gold standard which exactly defines how much substance use is problematic and what degree of risk in sexual activity is normative. Also, the degree to which respondents were completely forthcoming with their responses to the questions related to these constructs is unknown. Additionally, this analysis still does not put to rest the direction of causality between foster care placement instability and problem behaviors, which is another limitation. It is possible that youth with personality traits and behaviors related to substance use and risky sexual behaviors in young adulthood moved frequently during foster care due to these pre-existing conditions and, therefore, both the instability and the less favorable outcomes in young adulthood were results of the pre-existing conditions. The analysis attempted to control for this effect by controlling for the adversities and life traumas that are commonly associated with problem behaviors and poor outcomes, however, it is unknown if this resulted in the desired goal. Finally, the relatively small sample size may have yielded insufficient power to detect some relationships.

Conclusion

This study indicates that placement instability can create long-term negative consequences for youth who age out of foster care. Social workers who work with children and youth in the child welfare system can promote resilience among this population by advocating for fewer placement changes and better planned changes. Providing relational and ecological stability to youth in foster care could decrease their engagement in risky behaviors in young adulthood.

Acknowledgments This study was funded by a NIDA Dissertation Grant (5R36DA23280-2)

References

- Arizona Vital Statistics. (2007). *Pregnancy rates and number of live births, fetal deaths and abortions to teens by individual age, Arizona, 2007 (Table 1A-7)*. Arizona Department of Health Services, Arizona Health Status and Vital Statistics 2007. Retrieved from <http://www.azdhs.gov/plan/report/ahs/ahs2007/toc07.htm>.
- Barber, J. G., & Delfabbro, P. H. (2003). Placement stability and the psychosocial well-being of children in foster care. *Research on Social Work Practice, 13*(4), 415–431.
- Barth, R. P. (1990). On their own: The experiences of youth after foster care. *Child and Adolescent Social Work Journal, 7*(5), 419–440.

- Berry, E. H., Shillington, A. M., Peak, T., & Hohman, M. M. (2000). Multi-ethnic comparison of risk and protective factors for adolescent pregnancy. *Child and Adolescent Social Work Journal*, 17(2), 79–96.
- Berzin, S. C. (2008). Difficulties in the transition to adulthood: Using propensity scoring to understand what makes foster youth vulnerable. *Social Services Review*, 82(2), 171–196.
- Blome, W. W. (1997). What happens to foster kids: Educational experiences of a random sample of foster care youth and a matched group of non-foster care youth. *Child and Adolescent Social Work Journal*, 14(1), 41–53.
- Brandford, C., & English, D. J. (2004). *Foster youth transition to independence study: Final report*. Office of Children's Administration Research. Retrieved from www.dshs.wa.gov/pdf/ca/FYTfinal2004.pdf.
- Buehler, C., Orme, J. G., Post, J., & Patterson, S. A. (2000). The long-term correlates of family foster care. *Children and Youth Services Review*, 22(8), 595–625.
- Burley, M., & Halpern, M. (2001). *Educational attainment of foster youth: Achievement and graduation outcomes for children in state care*. Washington State Institute for Public Policy. Retrieved from <http://www.wsipp.wa.gov/rptfiles/FCEDReport.pdf>.
- Carpenter, S. C., Clyman, R. B., Davidson, A. J., & Steiner, J. F. (2001). The association of foster care or kinship care with adolescent sexual behavior and first pregnancy. *Pediatrics*, 108(3), e46. Retrieved from <http://pediatrics.aappublications.org/cgi/reprint/108/3/e46>.
- Cashmore, J., & Paxman, M. (2006). Predicting after-care outcomes: The importance of 'felt' security. *Child and Family Social Work*, 11(3), 232–241.
- Centers for Disease Control. (2005). *Prevalence of use of a specific birth control method among persons of reproductive age, by sex and selected characteristics—Arizona behavioral risk factor surveillance system, 2002*. Contraceptive use—United States and territories, behavioral risk factor surveillance system, 2002 (Table 6). Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5406a1.htm>.
- Centers for Disease Control. (2009). *Proportion of sexual behaviors, exposure to prevention activities, and pregnancy wantedness among females aged 15–24 years by age group—National Survey of Family Growth, United States, 2002*. Sexual and reproductive health of persons aged 10–24 years—United States 2002–2007 (Table 2). Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5806a1.htm#tab2>.
- Cook, R., Fleishman, E., & Grimes, V. (1991). *A national evaluation of title IV-E foster care independent living programs for youth. Phase 2 Final Report, Volumes 1 and 2*. U.S. Department of Health and Human Services. Rockville, MD: Westat Inc.
- Courtney, M. E., Dworsky, A., Cusick, G. R., Havlicek, J., Perez, A., & Keller, T. (2007). *Midwest evaluation of the adult functioning of former foster youth: Outcomes at age 21*. Chapin Hall Center for Children at the University of Chicago. Retrieved from http://www.chapinhall.org/sites/default/files/ChapinHallDocument_2.pdf.
- Courtney, M. E., Dworsky, A., Ruth, G., Keller, T., Havlicek, J., & Bost, N. (2005). *Midwest evaluation of the adult functioning of former foster youth: Outcomes at age 19*. Chicago: IL: Chapin Hall Center for Children at the University of Chicago. Retrieved from http://www.chapinhall.org/sites/default/files/ChapinHallDocument_4.pdf.
- Courtney, M., Piliavin, I., Grogan-Kaylor, A., & Nesmith, A. (2001). Foster youth transitions to adulthood: A longitudinal view of youth leaving care. *Child Welfare*, 80(6), 685–717.
- Courtney, M., Terao, S., & Bost, N., (2004). *Midwest evaluations of the adult functioning of former foster youth: Conditions of youth preparing to leave state care*. Chicago, IL: Chapin Hall Center for Children at the University of Chicago. Retrieved from http://www.chapinhall.org/sites/default/files/CS_97.pdf.
- Crosson-Tower, C. (2007). *Exploring child welfare: A practice perspective* (4th ed.). Boston, MA: Pearson Education, Inc.
- Cunningham, R. M., Stiffman, A. R., & Dore, P. (1994). The association of physical and sexual abuse with HIV risk behaviors in adolescence and young adulthood: Implications for public health. *Child Abuse and Neglect*, 18(3), 233–245.
- D'Amico, E. J., Ellickson, P. L., Collins, R. L., Martino, S., & Klein, D. J. (2005). Processes linking adolescent problems to substance-use problems in late young adulthood. *Journal of Studies on Alcohol*, 66(6), 766–775.
- DCYF Policy Manual. (n.d.). CHILDS Electronic version. Available through the Arizona Department of Economic Services, Division of Children, Youth, and Families, Child Protective Services.

- Delfabbro, P. H., Barber, J. G., & Cooper, L. (2002). Children entering out-of-home care in South Australia: Baseline analyses for a 3-year longitudinal study. *Children and Youth Services Review, 24*(12), 917–932.
- Dore, M. M., & Eisner, E. (1993). Child-related dimensions of placement stability in treatment foster care. *Child and Adolescent Social Work Journal, 10*(4), 301–317.
- Driscoll, A. K., Sugland, B. W., Manlove, J., & Papillo, A. R. (2005). Community opportunity, perceptions of opportunity, and the odds of an adolescent birth. *Youth and Society, 37*(1), 33–61.
- English, E. J. (2003). *Foster youth transition to independence study: Second annual report*. Office of Children's Administration. Retrieved from http://www1.dshs.wa.gov/pdf/ca/FYTRpt_2.pdf
- Festinger, T. (2005). Adoption disruption: Rates, correlates and service needs. In G. P. Mallon & P. Hess (Eds.), *Child welfare for the 21st century: A handbook of children, youth, and family services—Practices, policies, and programs*. New York: Columbia University Press.
- Herrenkohl, E. C., Herrenkohl, R. C., & Egolf, B. P. (2003). The psychosocial consequences of living environment instability on maltreated children. *American Journal of Orthopsychiatry, 73*(4), 367–380.
- Hughes, D. M., Condron, B., Jackson, N., Pitchal, E., Garton, N., & Elliott, S. P. (2008). *Preparing our kids for education, work and life: A report of the task force on youth aging out of DSS care*. The Boston Foundation. Retrieved from http://www.tbf.org/uploadedFiles/tbforg/Utility_Navigation/Multimedia_Library/Reports/DSS_Report_0522.pdf.
- Hyde, J., & Kammerer, N. (2009). Adolescents' perspectives on placement moves and congregate settings: Complex and cumulative instabilities in out-of-home care. *Children and Youth Services Review, 31*(2), 265–273.
- Jekielek, S., & Brown, B. (2005). *The transition to adulthood: Characteristics of young adults ages 18 to 24 in America*. Annie E. Casey Foundation, Population Reference Bureau, and Child Trends. Retrieved from <http://www.prb.org/pdf05/transitiontoadulthood.pdf>.
- Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2009). *Monitoring the future national survey results on drug use, 1975–2008. Volume I: Secondary school students; Vol. II: College students and adults ages 19–50*. Bethesda, MD: National Institute on Drug Abuse.
- Jonson-Reid, M., & Barth, R. P. (2000). From placement to prison: The path to adolescent incarceration from child welfare supervised foster or group care. *Children and Youth Services Review, 22*(7), 493–516.
- Kerman, B., Wildfire, J., & Barth, R. P. (2002). Outcomes for young adults who experienced foster care. *Children and Youth Services Review, 24*(5), 319–344.
- Kools, S. M. (1997). Adolescent identity development in foster care. *Family Relations, 46*(3), 263–271.
- Kools, S. (1999). Self-protection in adolescents in foster care. *Journal of Child and Adolescent Psychiatric Nursing, 12*(4), 139–152.
- Kortenkamp, K., & Ehrle, J. (2002). The well-being of children involved with the child welfare system: A national overview. *The Urban Institute, B*(B-43). Retrieved from http://www.urban.org/UploadedPDF/310413_anf_b43.pdf.
- Krohn, M. D., Lizotte, A. J., & Perez, C. M. (1997). The interrelationship between substance use and precocious transitions to adult statuses. *Journal of Health and Social Behavior, 38*(1), 87–103.
- Leathers, S. J. (2006). Placement disruption and negative placement outcomes among adolescents in long-term foster care: The role of behavior problems. *Child Abuse and Neglect, 30*(3), 307–324.
- Lee, R. E., & Whiting, J. B. (2007). Foster children's expression of ambiguous loss. *The American Journal of Family Therapy, 35*(5), 417–428.
- Love, L. T., McIntosh, J., Rost, M., & Tertzakian, K. (2005). *Fostering hope: Preventing teen pregnancy among youth in foster care*. Washington, DC: National Campaign to Prevent Teen Pregnancy.
- Maza, P. L. (2009). A comparative examination of foster youth who did and did not achieve permanency. In B. Kerman, M. Freundlich, & A. N. Maluccio (Eds.), *Achieving permanence for older children & youth in foster care* (pp. 32–39). New York: Columbia University Press.
- McMillen, J. C., & Tucker, J. (1999). The status of older adolescents at exit from out-of-home care. *Child Welfare, 118*(3), 339–360.
- Mech, E. (2003). *Uncertain futures: Foster youth in transition to adulthood*. Washington, DC: Child Welfare League of America Press.
- Moore, D. R., & Florsheim, P. (2001). Interpersonal processes and psychopathology among expectant and nonexpectant adolescent couples. *Journal of Consulting and Clinical Psychology, 69*(1), 101–113.
- Narendorf, S. C., & McMillen, J. C. (2010). Substance use and substance use disorders as foster youth transition to adulthood. *Children and Youth Services Review, 32*(1), 113–119.

- Newton, R. R., Litrownik, A. J., & Landsverk, J. A. (2000). Children and youth in foster care: Disentangling the relationship between problem behaviors and number of placements. *Child Abuse and Neglect*, 24(10), 1363–1374.
- Pecora, P. J., Kessler, R. C., Williams, J., O'Brien, K., Downs, A. C., English, D., White, J. Hiripi, E., White, C. R. Wiggins, T., & Holmes, K. (2005). *Improving family foster Care: Finding from the northwest foster care alumni study*. Retrieved from http://www.casey.org/Resources/Publications/pdf/ImprovingFamilyFosterCare_FR.pdf.
- Pecora, P. J., Williams, J., Kessler, R. C., Hiripi, E., O'Brien, K., Emerson, J., et al. (2006). Assessing the educational achievements of adults who were formerly placed in family foster care. *Child and Family Social Work*, 11(3), 220–231.
- Perry, B. L. (2006). Understanding social network disruption: The case of youth in foster care. *Social Problems*, 53(3), 371–391.
- Pew Charitable Trusts, Kids are Waiting Campaign & Jim Casey Youth Opportunities Initiative. (2007). *Time for reform: Aging out and on their own, more teens leaving foster care without a permanent family*. Retrieved from http://www.pewtrusts.org/uploadedFiles/wwwpewtrustsorg/Reports/Foster_care_reform/Kids_are_Waiting_TimeforReform0307.pdf.
- Pilowsky, D. J., & Wu, L. (2006). Psychiatric symptoms and substance use disorders in a nationally representative sample of American adolescents involved with foster care. *Journal of Adolescent Health*, 38(4), 351–358.
- Reilly, T. (2003). Transition from care: Status and outcomes of youth who age out of foster care. *Child Welfare*, 82(6), 727–746.
- Roper, T. (2008). *Report card on the education of foster children*. Center for Public Policy Priorities (No. 08-319). Retrieved from <http://www.cppp.org/research.php?aid=752>.
- Rosenfeld, L. B., & Richman, J. M. (2003). Social support and educational outcomes for students in out-of-home care. *Children and Schools*, 25(2), 69–86.
- Rosenthal, D. A., Smith, A. M. A., & de Visser, R. (1999). Personal and social factors influencing age at first sexual intercourse. *Archives of Sexual Behavior*, 28(4), 319–333.
- Rubin, D. M., O'Reilly, A. L. R., Luan, X., & Localio, A. R. (2007). The impact of placement stability on behavioral well-being for children in foster care. *Pediatrics*, 119, 336–344.
- Ryan, J. P., Hernandez, P. M., & Herz, D. (2007). Developmental trajectories of offending for male adolescents leaving foster care. *Social Work Research*, 31(2), 83–93.
- Salahu-Din, S. N., & Bollman, S. R. (1994). Identity development and self-esteem of young adolescents in foster care. *Child and Adolescent Social Work Journal*, 11(2), 123–135.
- SAMHSA. (2004). Types of illicit drug use in lifetime, past year, and past month among persons aged 18 to 25: Percentages, 2002–2004. *2004 National survey on drug use and health: Results* (Table H.4). Office of Applied Studies. Retrieved from <http://www.oas.samhsa.gov/NSDUH/2k4NSDUH/2k4results/appH.htm>.
- SAMHSA. (2005). *Substance use and need for treatment among youths who have been in foster care*. Office of Applied Studies, National Survey on Drug Use and Health, 2002 and 2003, The NSDUH Report. Retrieved from <http://www.oas.samhsa.gov/2k5/FosterCare/FosterCare.htm>.
- SAMHSA. (2007). 2007 State estimates of substance use and mental health: Arizona. *State estimates of substance use and mental health from the 2006–2007 national surveys on drug use and health*. (Table 6) Office of Applied Studies. Retrieved from <http://www.oas.samhsa.gov/2k7/State/Arizona.htm>.
- Samuels, G. M. (2008). *A reason, a season, or a lifetime: Relational permanence among young adults with foster Care backgrounds*. Chapin Hall Center for Children at the University of Chicago. Retrieved from http://www.chapinhall.org/sites/default/files/old_reports/415.pdf.
- Schulenberg, J., Bachman, J. G., O'Malley, P. M., & Johnston, L. D. (1994). High school educational success and subsequent substance use: A panel analysis following adolescents into young adulthood. *Journal of Health and Social Behavior*, 35(1), 45–62.
- Shin, S. H., & Poertner, J. (2002). *The well-being of older youth in out-of-home care who are headed to independence*. Urbana, IL: Children and Family Research Center, School of Social Work, University of Illinois at Urbana-Champaign.
- Singer, A. (2006). *Assessing outcomes of youth transitioning from foster care*. State of Utah Department of Human Services. Retrieved from: http://www.mockingbirdsociety.org/files/reference/Transitioning_Youth/Utah_CWS_Research.pdf.
- Stott, T., & Gustavsson, N. (2010). Balancing permanency and stability for youth in foster care. *Children and Youth Services Review*, 32(4), 619–625.

- Taussig, H. N. (2002). Risk behaviors in maltreated youth placed in foster care: A longitudinal study of protective and vulnerability factors. *Child Abuse and Neglect*, 26(11), 1179–1199.
- Thompson, R. G., & Auslander, W. F. (2007). Risk factors for alcohol and marijuana use among adolescents in foster care. *Journal of Substance Abuse Treatment*, 32(1), 61–69.
- Timberlake, E. M., & Verdick, M. J. (1987). Psychosocial functioning of adolescents in foster care. *Social Casework: The Journal of Contemporary Social Work*, 68(4), 214–222.
- Unrau, Y. A., Seita, J. R., & Putney, K. S. (2008). Former foster youth remember multiple placement moves: A journey of loss and hope. *Children and Youth Services Review*, 30(11), 1256–1266.
- U.S. Department of Health and Human Services. (2010). The AFCARS report: Preliminary FY 20098 estimates as of July 2010 (17). Retrieved from: http://www.acf.hhs.gov/programs/cb/stats_research/afcars/tar/report17.htm.
- Vaughn, M. G., Ollie, M. T., McMillen, J. C., Scott, L., & Munson, M. (2007). Substance use and abuse among older youth in foster care. *Addictive Behaviors*, 32(9), 1929–1935.
- Webster, D., Barth, R. P., & Needell, B. (2000). Placement stability for children in out-of-home care: A longitudinal analysis. *Child Welfare*, 79(5), 614–632.
- Wertheimer, R. (2002, December). Youth who “age out” of foster care: Troubled lives, troubling prospects. *Child Trends Research Brief*. Washington, DC: Child Trends. Retrieved from <http://www.childtrends.org/Files/FosterCareRB.pdf>.
- White, H. R., Labouvie, E. R., & Papadratsakis, V. (2005). Changes in substance use during the transition to adulthood: A comparison of college students and their noncollege age peers. *Journal of Drug Issues*, 35(2), 281–305.
- Williams, J. R., Pope, S. M., Sirles, E. A., & Lally, E. M. (2005). *Alaska foster care alumni study*. Anchorage, AK: Casey Family Programs, University of Alaska Anchorage School of Social Work, Alaska State Office of Children’s services, Tribal-State Collaboration Group.
- Wulczyn, F. (2009). Foster youth in context. In B. Kerman, M. Freundlich, & A. N. Maluccio (Eds.), *Achieving permanence for older children & youth in foster care* (pp. 13–31). New York, NY: Columbia University Press.
- Wulczyn, F., Kogan, J., & Harden, B. J. (2003). Placement stability and movement trajectories. *Social Service Review*, 77(02), 212–236.
- Young, T. M., Martin, S. S., Young, M. E., & Ting, L. (2001). Internal poverty and teen pregnancy. *Adolescence*, 36(142), 289–304.

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