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LONGITUDINAL OUTCOMES OF YOUTH WHO AGE OUT OF FOSTER CARE

by

TEGAN M. LESPERANCE

DISSERTATION

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

2018

MAJOR: PSYCHOLOGY (Clinical)

Approved By:

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Advisor Date

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CHAPTER 1: INTRODUCTION

Study Context

Each year in America, between 20,000 and 30,000 youths reach an age, typically 18 years, when they must exit the foster care system due to age restrictions, in a process referred to as *aging out* (U. S. Department of Health and Human Services, 2016). Representing 9% of the total point-in-time individuals in foster care, these youths are suddenly considered adults by the state that supported them for at least part of their lives, and they must immediately assume responsibility for securing housing, earning an income, and making decisions about their scholastic futures (Child Welfare Information Gateway, 2017). Their former foster parents no longer receive payments to subsidize the shelter and care of these youths, and eligibility lapses in medical and tuition benefits occur in many states.

With unreliable parental support and a discontinuation of services, aged-out youth are unfortunately at an increased risk for problems in multiple domains critical to successful development in adulthood (Courtney & Heuring, 2005; Masten, Obradovic, & Burt, 2006). This is compounded by risk factors accumulated over the lifespan, such as exposure to abuse, neglect, and extreme poverty (McMillen, et al., 2001).

Research assessing adolescent readiness to transition out of foster care has identified a sizable minority of foster youths who can be classified as having low- or moderate-readiness, as indicated by employment, education, and various life experiences, as well as risk for criminal involvement and psychopathology (Keller, Cusick, & Courtney, 2007; Vaughn, Shook, & McMillen, 2008). Resilience factors which buffer the negative factors related to poor transition have also been identified. Some youths who experience adversity nevertheless manage to thrive post-foster care due to personal resources such as optimism, intelligence, goal-orientation, and the ability to plan for the future (Eccles, Templeton, Barber, & Stone, 2003; Haas & Graydon,

2009; Masten et al., 2004; Roisman, Aguilar, & Egeland, 2004). While these personal attributes are undoubtedly important in understanding former foster youth outcomes, they are not as amenable to intervention as are external environmental factors which can be targeted by prevention programs and policies.

The Context of Emerging Adulthood

Youth who age out of foster care transition to adulthood at a particularly vulnerable time known as *emerging adulthood*. Emerging adulthood refers to the developmental period, which for most individuals takes place between the ages of 19 and 25, where youths explore adult roles and responsibilities (Arnett, 2000). The goal of this period is to acquire the skills and experiences necessary to transition successfully to the adult role, and often the period is marked by instability as youths change residences, jobs and schools more than in any other period of life (Arnett, 2000; Eccles, et al., 2003).

As emerging adults experiment with experiences and roles, many rely on the support of parents (Schoeni & Ross, 2005). On average, parents report spending $2200 and 367 hours yearly to support and mentor their adult children (ages 18-to 34-years; Schoeni & Ross, 2005). In fact, those raising children are estimated to spend nearly one-quarter of their entire child-rearing cost after youth reach age 17, with two-thirds of emerging adults in their early 20s receiving direct economic support from their parents (Shoeni & Ross, 2005).

Without this support, many former foster youths find emerging adulthood to be a time of floundering while their peers thrive. While many emerging adults can experience setbacks and change directions in a supported context, these developmentally normal situations place many foster youth in turmoil and at an increased risk for a number of negative experiences in emerging

adulthood (Masten, Obradovic, & Burt, 2006; Osgood, Foster, Flanagan, & Ruth, 2005; United States Department of Health and Human Services, 2007).

Outcomes of Former Foster Youth

Foster youth experience a number of poor outcomes at disproportionately high rates, compared to youth in the general population (Ahrens, et al., 2010; Courtney, Dworsky, Lee & Raap, 2010; Davis, 2006; Fowler, Toro, & Miles, 2009; Goerge, et al., 2002; Greene, Ennet, & Ringwalt, 1999; Pilowsky & Wu, 2006). For example, less than 60% of aged out foster youth graduate from high school by age 19, compared to 87% of non-foster youth (Courtney, 2009). While 10% of foster youth go on to earn a general equivalence degree (GED), this may not improve employment prospects unless those youth continue on to postsecondary education (Hamilton & Hamilton, 2006).

Additionally, foster youth who age out also attend and complete higher education at lower rates than their peers (Courtney, et al, 2005), with one study reporting that 26% completed a degree or certificate (Pecora, et al., 2006). Of those, about 15% completed a vocational/technical degree and only 2.7% completed a 4-year degree. Postsecondary education provides emerging adults with a number of benefits, including a supportive context in which to explore career options, relationships, and adult identities. It can serve as a stepping stone to increased autonomy and economic stability, and it can lead youth to a career which provides additional emotional satisfaction (Eccles, et al., 2003). Those with college degrees, for example, benefit from increased job stability, higher wages, healthcare coverage, and additional supports (Hamilton & Hamilton, 2006). Youths who age out often miss out on these benefits as they experience significant barriers to postsecondary educational attainment.

If they do enroll in post-secondary education, aged out youth are more likely to choose a two-year college than their non-foster care peers (56% versus 25%) and less likely to enroll in a four-year college (28% versus 71%; Courtney, Dworsky, Lee & Raap, 2010). Davis (2006) used data from the National Center for Education Statistics (NCES) and found that "college qualified" foster youth were far less likely than their non-foster care peers to complete a degree or certificate within the first six years of enrollment (26% versus 56%), despite being more likely than those with no foster care experience to received financial aid.

This suggests that barriers beyond the financial are hindering the progress of these youth. In one qualitative study of testimonies given by 43 high-school and college-aged current and former foster youth, self-identified barriers to educational success included a lack of permanent relationships with caring adults, lack of resources for educational materials, inability to participate in extracurricular activities, untreated mental health problems, and lack of preparation and support for independent living (Day, Riebschleger, Dworsky, Damashek, & Fogarty, 2012).

Whether they attend college or not, employment during emerging adulthood is an important context in which to explore roles, receive mentorship, and gain skills (Hamilton & Hamilton, 2006). However, aged-out youth are often unemployed or underemployed during emerging adulthood, making it difficult for them to attain stability and nearly impossible for them to reap the benefits of early and stable employment (Dworsky, 2005; Goerge, et al., 2002). In a study examining the employment patterns of former foster youth in their first two years following aging out, Dworsky (2005) found that the majority of youths were only employed for approximately 6 months of that follow-up period. Additionally, these youths earned wages that fall below the federal poverty guidelines and they often exhibited patterns of instability in employment status.

In a similar study of aged out youth in California, Illinois and South Carolina, Goerge and colleagues (2002) reported that no more than 45% of aged out youth in their sample were employed at any given point during a 3-year 3-month follow-up period. Aged out youths were employed at lower rates than youths from impoverished backgrounds who were never in foster care. Aged out youths in California and South Carolina had a 50% chance of gaining employment by age 20, while youths in Illinois had less than a 50% chance. This study also found that employed aged-out foster youth earned considerably less income than youth who were reunified with their families following foster care and those youth from impoverished families. The wages earned fell significantly below the federal poverty level.

Together, studies on the education and employment of aged-out youth suggest they are without support in a variety of ways. They miss out on the nurturance and self-exploration of early education and job experiences, and they lack the credentials and financial means to attain stability. At a time when peers are often afforded the leeway necessary for healthy development, these youths are without a safety net.

Related to the instability in education and employment experienced by aged out youth is their frequent struggle to secure safe and stable housing. The 2010 United States Census data estimates the number of adults, ages 18 to 29, living with their parents to be 36.6% (Lofquist, Lugaila, O'Connell, & Feliz, 2012), with African Americans more likely to reside with family until older ages, compared to European Americans (Hamilton & Hamilton, 2006). These youth have the flexibility of remaining or returning home, as 40% of emerging adults do in their early 20s, when the trials of securing a job or education in a difficult and competitive economy overwhelm their resources (Goldscheider & Goldscheider, 1999). While emerging adulthood is still marked by transience, even for non-foster youth, many aged out and foster youth experience

emerging adulthood as a time of housing instability and homelessness, possibly because they lack parental support (Courtney et al., 2007).

When surveyed retrospectively, 20 to 30% of homeless adults report having been involved in the foster care system (Roman & Wolfe, 1995; Toro & Warren, 1999). Within the first few years after aging out, it is estimated that 12-26% of aged-out foster youth experience a least one period of literal homelessness, meaning they resided in homeless shelters or places not intended for human accommodation (Courtney, Piliavin, Grogan-Kaylor, & Nesmith, 2001; Courtney et al., 2005; Stott, 2009). This prevalence is more than six times higher than the national 5-year prevalence of adult literal homelessness in 2001 (Tompsett, Toro, Guzicki, Manrique, & Zatakia, 2006).

Using data from the National Longitudinal Survey of Youth 1997, Berzin, Rhodes, and Curtis (2011) compared foster youth (n = 133) to a matched sample (n = 458) and results indicated that foster youth struggled more during their transition to independent living. Specifically, one study found that foster youth had higher rates of homelessness, less housing stability, more reliance on public housing assistance and poorer neighborhood quality when compared to a matched an unmated sample of youth (Berzin, Rhodes, & Curtis, 2011).

In addition to those who are literally homeless, a substantial proportion of aged-out youths experience periods of precarious housing, meaning they reside in temporary living arrangements with friends and family because they cannot afford to live elsewhere (Fowler, Toro, & Miles, 2009). The difficulty aged-out youths face in securing safe and stable housing likely makes it all the more challenging for them to achieve educational or employment goals, making it increasingly difficult for them to transition successfully into adulthood.

While aged-out youth face difficulties in terms of educational, employment and housing outcomes, these youth, and former foster youth in general, also suffer from emotional and behavioral problems, such as deviant and criminal activity, risky sexual behavior, and alcohol and drug abuse/dependence, more often than general population youth (Courtney, Terao, & Bost, 2004; Courtney et al., 2005; Jones, 2011; Pecora, Kessler, Williams, O'Brien, & Downs et al., 2005).

Most emerging adults experience increased stressors and a loss of supports, while supervisory structures no longer moderate impulsive behaviors. In general, this means emerging adulthood is a time of increased psychological distress, substance abuse, and risky behaviors, and this is certainly true of many aged-out youth (Courtney et al., 2001). In fact, the Surgeon General listed former foster youth among those most at risk for suicide mainly due to their high rates of suicide risk factors, such as mental illness and substance abuse (U.S. Department of Health and Human Services, 2016). One study reported this population is almost three times more likely than their peers to have considered suicide and nearly four times as likely to have attempted suicide (Pilowsky & Wu, 2006).

Mental health problems are prevalent among former foster youth. Studies indicate that at least one-third of former foster youth suffer from a diagnosable mental health issue (Barth, 1990; Courtney et al., 2001). A study of 113 Wisconsin aged-out youths, assessed 12-18 months after exiting foster care, found youths reported greater psychological distress than national norms for youths of the same age and race (Courtney et al., 2001). In addition, 18% reported having been incarcerated at least once since exiting foster care.

Similarly, a larger prospective study of 732 aged-out foster youth from Iowa, Illinois and Wisconsin showed high rates of substance abuse disorders and mental health disorders among

the youth (Courtney et al., 2005, 2007). In the final wave of data collection, 530 of these aged-out youths were interviewed at age 21 years, and the 12-month prevalence rate for substance abuse disorders was 16%, while the rate for mental disorders was 9%. Mental disorders prevalent among these youths included post-traumatic stress disorder and mood disorders (mainly depression and dysthymia). The youths also demonstrated higher rates of delinquency in the past 12 months, when compared to national norms, with crimes involving property damage, theft, belonging to a gang, and selling drugs among the most prevalent. Further, gender differences emerged such that women reported higher rates of mood symptoms while men reported more substance abuse and deviance (Courtney et al., 2005, 2007).

In the Northwest Foster Care Alumni study of family foster care, Pecora and colleagues (2005) interviewed 479 former foster youth, ages 20 to 33 years, and found the youth demonstrated poorer mental health outcomes than a general population sample. Overall, 54% of the sample had current mental health problems, compared to 22% seen in the comparison group. Twelve-month prevalence rates of post-traumatic stress disorder (25.2% versus 4.0%) and major depressive disorder (20.1% versus 10.2%) was significantly higher in the foster care sample than in the general population. However, they did not find significant differences between former foster youth and the general population for diagnoses of alcohol dependence and anorexia nervosa (Pecora et al., 2005).

In a more recent small mixed-method study of 16 former foster youths over the first 3 years after foster care exit, Jones (2011) found that 10 of the 16 developed at least one risk factor including problems with substance abuse, mental health problems and financial difficulties. Half of the sample developed a drug and/or alcohol problem, as well as poor financial stability, by the end of 3 years (Jones, 2011).

Research on former foster and aged-out youth has also begun to acknowledge the importance of considering risky sexual behaviors, along with other risk factors. As sexual risk-taking often occurs within a context of substance involvement (Oshima, Narendorf, & McMillen, 2013) and/or a lack of resources, aged-out youth are particularly vulnerable given their higher rates of substance-involvement, poverty, and housing instability (Courtney et al., 2007; Greene, Ennet, & Ringwalt, 1999). Throughout adolescence and into emerging adulthood, foster youth report higher rates of sexual risk including early sexual intercourse, casual sex, more sexual partners (Ahrens, et al., 2010), sex for drugs or money (Ahrens et al., 2010; Courtney et al., 2007), and sex with a partner who has a sexually transmitted infection (STI; Courtney et al., 2007).

Multiple studies have documented an increased risk of acquiring sexually transmitted diseases among aged out (e.g. Courtney et al., 2011) and even current foster youth (Sullivan & van Zyl, 2008). In fact, compared to the general population, foster youth are estimated to have between 3 and 14 times the risk of contracting an STI (Ahrens, et al., 2010). Data (n = 732) from the Midwest Evaluation of Adult Functioning of Former Foster Youth, a multi-state longitudinal study of aged-out youth, indicate that among those aged 17 and 18 years, 79% reported inconsistent condom use, 30% reported having ever had an STI or having a partner with an STI within the past year, 21% reported having had 5 or more sexual partners, and 9% reported having exchanged sex for money (Ahrens, McCarty, Simoni, Dworsky, & Courtney, 2013). Further, youths from this study at age 26 were nearly twice as likely to report having ever had an STI compared to their same-age peers in the general population (44% versus 23% for women and 18% versus 11% for men; Courtney, et al., 2011).

In addition to the significant risk of STIs among former foster youth, higher rates of pregnancy have been reported. In a sample of aging-out women from the Midwest Study, half reported having been pregnant by the age of 19, while only 20% of women in a nationally representative sample of general population youth reported the same (Dworsky & Courtney, 2010). By age 25 to 26, nearly 80% of the women in the Midwest sample reported having ever been pregnant, compared to 55% in a general population sample, and over 60% of the men reported having ever impregnated a partner, compared to 39% of the comparison group (Courtney, et al., 2011).

Similarly, a prospective study of 325 foster youths, from ages 17 to 19, found that by age 19, 55% of girls/women reported having been pregnant, and 23% of boys/men reported having impregnated a partner (Oshima, Narendorf, & McMillen, 2013). This represented an increase in pregnancy of 300% over the two years of the study. Interestingly, women with histories of arrests and men who exited foster care earlier were more likely to experience pregnancy. While pregnancy is not in itself a negative outcome, early and unwanted pregnancy may make achieving stability and goals more difficult for these youths who are already at an increased risk for poor outcomes.

As mentioned previously, foster youth also reported increased rates of transactional sex, or sex in exchange for drugs or money (Ahrens, et al., 2010). Surratt and Kurtz (2012) discovered that 17% of their sample of African American female sex workers reported having been in foster care, and 62% of those reported selling sex before the age of 18. Transactional sex is associated with a number of important health consequences, including STIs, depression, substance abuse, and victimization (Burnette, et al., 2008) and it has been linked to early experiences of abuse (Surratt & Kurtz, 2012; Wilson & Widom, 2008).

Transactional sex is related to a broader problem prevalent throughout the lives of foster youth: victimization. The majority of foster youth were removed from their original homes due to abuse or neglect (U. S. Department of Health and Human Services, 2016). In the Midwest study of aged-out youth, 27% reported a history of sexual molestation and 18% reported a history of rape, prior to exiting foster care (Ahrens, Katon, McCarty, Richardson, & Courtney, 2012). At age 19, 5% of the Midwest sample had engaged in transactional sex; 3.5% in the past year, and those reporting histories of sexual abuse or rape were more likely to engage in this risky sexual behavior than those without such a history (Ahrens, et al., 2012).

Similarly, in their 30-year prospective study, Wilson and Widom (2008) found that adults who had been physically or sexually abused as children were at significantly greater risk for prostitution, as well as early sexual contact and HIV infection. Given their histories of victimization, it is particularly important to understand the ways that these experiences impact the trajectories of former foster youth.

Victimization experiences throughout the lifespan increase foster youths' risk for additional negative outcomes. For example, in a sample of 17-year-old foster youth (n = 373), the strongest predictor of later psychiatric disorder was the number of types of maltreatment experienced in childhood (McMillen et al., 2005). Additionally, exposure to victimization is related to disruptions in housing and education among at-risk adolescents (Toro, Dworsky, & Fowler, 2007), and housing instability puts foster youth at increased risk for being victimized (Greene, Ennet, & Ringwalt, 1999).

This is demonstrated by the aged-out youth in the Midwest study, who were significantly more likely to have been the victims of violent crime than their non-foster care peers (Courtney, et al., 2009). Men were more than twice as likely as women to report having been the victim of

a violent crime in the past year, most frequently being held at gun or knifepoint, while women were almost as likely to report the latter as they were to report having been beaten up (Courtney, et al., 2011).

Current Study

The current study surveyed 265 former foster youths within an average of 3.5 years of aging out. Additionally, 57 youths were followed at 8.28 years post-aging out, providing a unique opportunity to assess a number of long-term outcomes for this group. Variables assessed included demographic information, foster care case information, psychological distress, deviance, lifetime victimization, substance abuse/dependence, and risky sexual behaviors, as well as housing, educational, and employment outcomes. As the number of youths aging out of foster care accounts for an increasing percentage of foster care exits (U.S. Department of Health and Human Services, 2016), the need for research to better understand the trajectories of aged-out youth is critical, as it will be key in informing policy and prevention programs aimed at easing their transition into adulthood.

The present study had two main goals: First, to describe a representative sample of aged-out former foster youth throughout emerging adulthood using retrospective longitudinal data; second, to examine possible predictors of negative outcomes among former foster youth. To accomplish these goals, the study utilized a variety of descriptive statistics, as well as t-tests, chi square tests of independence and multivariate multiple regression.

Hypotheses

First, it was hypothesized that the aged-out former foster youth would report significant decreases in homelessness, deviancy, risky sexual behaviors, victimization, and psychological

distress over time, while reporting increases in substance abuse/dependence, educational attainment, and income.

Based upon the existing literature regarding the trajectories of former foster youth, the following were hypothesized to predict negative outcomes in post-aging out youth: More time spent in foster care, non-Caucasian race, younger age at foster care exit, higher number of foster care placements, and higher total victimization scores. Outcomes to be considered in analyses include: educational attainment, housing status, income, psychological distress, deviant behaviors, risky sexual behaviors, and substance abuse/dependence symptoms.

Additionally, it was hypothesized that gender would predict univariate outcomes such that male gender would be associated with lower educational attainment, less stable housing status, higher income, lower psychological distress, more deviant behaviors, more risky sexual behaviors, and increased substance abuse/dependence.

CHAPTER 2: METHOD

Procedure

The present study sampled 265 youths, between the ages of 19- and 23-years, who aged out of foster care in the Detroit metropolitan area (i.e., Wayne, Oakland, and Macomb counties). An exit-cohort sampling strategy was employed, and the Michigan Department of Human Services (DHS) provided case summaries and contact information for all youths aged 18 years or older in Southeast Michigan whose foster care cases closed in 2002 and 2003 (population N = 867).

Initial telephone interviews took place over a ten-month period in 2005 and 2006, approximately 2 to 4 years (M = 3.6 years) post-foster care. To contact the youths, a number of tracking tactics were employed, including searches of public records, informational mailings, and contact with family members listed in the summaries provided by DHS. In all, contact was attempted with 772 of the 867 youths who had aged out, and successful contact was made with 287. Of those contacted, 16 exhibited cognitive impairments and 6 refused to participate, resulting in a response rate of 34% (n = 265), which is similar to another study of former foster youths (Pecora et al., 2006).

Between late 2009 and early 2011, a second interview was attempted with all 265 of the participants. Using the information available from DHS and the tracking efforts from the first interview, as well as updated searches of public records, contact was attempted via phone and mail. Interviewers were given training, practice and feedback on the administration of the measures before beginning interviews. Upon first phone contact, potential participants were informed of the purpose and details of the study. At the time of follow-up, former participants'

identities were first verified using birthdates and middle names, and then they were reminded of the purpose of the study.

At both time points, participants provided verbal consent over the phone, and an information sheet explaining the study was later mailed along with $20 compensation for their time. In all, 58 participants were successfully contacted, reminded of their previous involvement with the study, and offered the opportunity to complete the same 30-minunte telephone survey. The final sample for the second follow-up included 57 youth (1 former participant declined to take part in the follow-up; 22% of the 265 interviewed in the first follow-up).

Sample characteristics are summarized in Table 1. The first interview sample of 265 young adults were 20.49 years old, on average, and 52.10% were female. Participants identified as 77.70% African American, 21.50% Caucasian, 0.40% Hispanic and 0.40% another race or ethnicity. According to their DHS summaries, these youth were primarily placed in foster care due to parental abuse or neglect, though 22% resided in foster care due to deviant behavior. On average, the sample entered foster care at 13.31 years of age (SD = 3.81), with a range from 1 to 17 years old. While in foster care, the youths experienced an average of 5.77 placements (SD = 4.31; range = 1 to 29).

These youths are representative of foster youth who age out in the Detroit Metropolitan area in terms of gender, ethnicity, and age (Fowler, 2009). The second interview sample of 57 was an average of 25.79 years old at the time of the interview, and they identified as 71.90% African American, 24.60% Caucasian, 1.80% Hispanic and 1.80% another race or ethnicity.

Measures

The current study included information from a variety of measures and records assessing a range of domains. These measures have been used in previous successful studies of at-risk and foster youth (Cauce et al., 1994; Cauce et al., 2000; McCaskill, Toro, & Wolfe, 1998; Wolfe, Toro, & McCaskill, 1999).

Life Circumstances. The Housing, Education and Income Timeline (HEIT) was used to explore the participants' housing security, educational attainment, and employment in the time since leaving foster care. The HEIT is based on the Life History Calendar technique in which participants recall specific aspects of their lives over time, accounting for each date so as to produce a timeline of each relevant domain (Freedman et al., 1988). Similar techniques have been found to be an accurate means of collecting continuous data on sequential personal events (i.e. jobs, homes; Caspi et al., 1995).

Further, this technique has demonstrated adequate reliability and validity in studies of at-risk populations of homeless adolescents and adults (McCaskill, Toro, & Wolfe, 1998; Toro et al., 1995, 1997). Among homeless adults, the technique demonstrated good test-retest reliability over a two week period, with number of housing sites ($r = .98$), income from employment ($r = .94$), and receipt of public assistance ($r = .79$) all within acceptable limits (Roll, Toro, & Ortola, 1999).

For this study, participants were first asked to furnish the date that they felt reflected their exit from foster care. This method was used, rather than referencing the official closure date from DHS records, because it more accurately reflects the perceptions of those impacted, rather than processing time within the foster care system. Starting from that date, they provided their living situations, educational experiences and sources of income to the present date. For the second

follow-up interview, they provided this information from their first interview date to the current interview date.

To assess housing, participants provided starting and ending dates for each housing experience, as well as the type of housing and whether or not they considered themselves homeless at each location. In accordance with federal guidelines for adolescent homelessness (McKinney-Vento Homeless Assistance Act), homelessness was defined as an undesirable living situation, even for one night, due to an inability to afford an alternative living arrangement.

Using this housing information, instances of homelessness were further categorized to reflect the level of safety available at each site. Literal homelessness was distinguished as sites such as homeless shelters or places not ordinarily deemed appropriate as a regular sleeping accommodation for human beings (i.e. abandoned buildings, cars, and parks). This definition of literal homelessness reflects the criteria set forth for adult homelessness by the United States Department of Housing and Urban Development (HUD).

Further, a category of precarious housing situations was used to categorize living sites which are temporary and utilized when other options cannot be afforded, such as cohabitating with friends, relatives, and others (Haber & Toro, 2004). Housing sites were then categorized, into three groups: unstable housing (literal homelessness, jail, or psychiatric hospital), precarious housing, and stable housing (any other living situation). A homelessness vector was additionally created to reflect those who had ever experienced literal homelessness (-1), those who had experienced precarious housing (0) and those who had not experienced homelessness (1) during each follow-up period.

Also using the HEIT, information on educational experiences was gathered. The HEIT includes information on graduating from high school and earning a general equivalence degree

(GED), and it also asks participants to recount each of their educational experiences, in order, since the day they exited foster care. These educational settings were coded into an education vector: Lacking a high school diploma or equivalence (-1), achieved a high school diploma or equivalence or received vocational training (0), and college attendance (1).

Finally, the HEIT provided a timeline of employment and sources of income. Participants were asked to recount all of their sources of income, whether documented or non, as well as the types of job or source and the income amount, from the time they exited foster care until the time of interview. Income derived from public assistance and illegal activities (i.e. drug sales or prostitution) were excluded.

Background and Demographic Information. The current study relied upon key demographic and background variables for enriched description of the sample. Drawing from self-report and available case files, necessary information included age, gender, ethnicity, and disability status, as well as self-reported information on having children, criminal convictions, and service use since foster care exit.

Psychological Distress. To assess a range of psychological symptoms and general psychological distress, the 53-item Brief Symptom Inventory was used (BSI; Derogatis & Melisaratos, 1983). The BSI asks participants to rate the amount they have been bothered by each symptom in the past 2 weeks on a 5-point scale ranging from 0 (not at all) to 4 (extremely). The BSI is widely used in research and clinical practice, and it yields a profile consisting of nine clinical subscales (Obsession-Compulsion, Interpersonal Sensitivity, Anxiety, Hostility, Somatization, Phobic Anxiety, Paranoid Ideation, Psychoticism, and Depression) and one summary score of psychological distress, the Global Severity Index (GSI), which was used in the current study.

Based on an adult normative sample, a score of 63 on the GSI was used as a cutoff indicating clinically significant distress (Derogatis, 1993). The BSI, or the longer SCL-90 on which the BSI is based, has been used in other studies of homeless and at-risk adolescents (Cauce et al., 1994; Tompsett, Fowler, & Toro, 2009) and there is considerable evidence of internal consistency (alphas range from .71 for Psychoticism to .85 for Depression) as well as concurrent and discriminant validity (Derogatis, 1993; Derogatis, 1977; Derogatis & Melisaratos, 1983).

Risky Sexual Behaviors. The Risky Sexual Behavior (RSB) scale assessed a range of self-reported sexual behaviors that carry various levels of risk. The following behaviors were each assessed on a 4-point scale: Frequency of sexual activity (0 = abstinent, 1 = not at all or rarely, 2 = sometimes, 3 = several times a week), and number of sexual partners (0 = abstinent, 1 = 0-1 partner, 2 = 2-3 partners, 3 = > 3 partners). The following were assessed on a 3-point scale: Birth Control and/or Condom use (0 = abstinent, 1 = always used, 2 = inconsistent use), and STD history (0 = abstinent, 1 = never diagnosed with an STD, 2 = history of 1 or more STDs). Dichotomous items (0 = no, 1 = yes) assessed the following: Drug and/or alcohol use while having sex, sex with intravenous drug users, anal sex, oral sex, exchanging sex for money and exchanging sex for drugs. These item scores were summed to form a total risky sexual behavior score. A similar scale, in studies of homeless adolescents and adults, has demonstrated good internal consistency (alpha = .86; Lombardo, 2001; Lombardo & Toro, 2003).

Victimization. Participants reported on their exposure, since leaving foster care, to a number of victimizing experiences using the Physical and Sexual Victimization Scale. This 9-item measure, which has been used in studies of at-risk adolescents, assesses exposure to serious physical harm and experiences of unwanted, coerced, and forced sexual contact (Stewart et al., 2004). Respondents are asked about the frequency with which they have been exposed to each

of the 9 scenarios, and they choose between 4 response options ranging from 0 (never) to 3 (many times). Scores falling more than one standard deviation above the sample mean were classified as indicating high levels of experienced victimization. The measure has demonstrated high internal consistency (Cronbach's α = .95, split half reliability = .71).

Alcohol and Marijuana Abuse and Dependence. Symptom counts of alcohol and marijuana abuse and dependence since foster care exit were assessed using the Diagnostic Interview Schedule: Version 3A (DIS). This structured diagnostic interview assesses a variety of psychiatric symptoms based on DSM-III-R criteria (Regier et al., 1988) and total scores for alcohol and marijuana abuse/dependence were derived.

Scores falling one standard deviation above the sample mean of symptoms were defined as clinically significant substance abuse problems. These scores represented four or more alcohol abuse symptoms and three or more marijuana abuse symptoms. In addition to demonstrating strong reliability and validity, the DIS has been used in a number of studies of the homeless (Fischer, Shapiro, Breakey, Anthony, & Kramer, 1986; Koegel, Burnam, & Farr, 1988; North & Smith, 1993; Toro et al., 1997).

Deviancy. To measure engagement in deviant behaviors, the conduct disorder symptoms subscale of the Diagnostic Interview Schedule: Version 3A (DIS; Regier et al., 1988) was used. The scale consists of 31 questions assessing 23 behaviors (i.e. starting fires, fighting, theft, sexual coercion, lying) in the past year, to which the respondent may answer 'yes' or 'no'. Additionally, there is one question assessing the number of job changes within the last year, and another asking for a list of recent aliases used by participants.

To be considered clinically significant, a deviance score needed to fall one standard deviation above the full sample mean of deviant behavior symptoms. As previously mentioned,

the DIS has been used in a number of studies of the homeless (Fischer, Shapiro, Breakey, Anthony, & Kramer, 1986; Koegel, Burnam, & Farr, 1988; North & Smith, 1993; Toro et al., 1997).

CHAPTER 3: RESULTS

Data Screening

Data were analyzed using SPSS version 24 (IBM Corp., 2016). To ensure the accuracy of the data, means, medians, standard deviations and ranges for each variable were inspected and all values fell within expected and possible parameters. Coefficients of variance also fell within appropriate limits, ensuring no computational inaccuracy resulting from small variance.

Variables were next screened for missing values at both time-points. Two participants declined to provide information regarding income and employment at the second time-point, resulting in a missing data rate of 3.50% for three related variables.

Of note, these participants provided information regarding multiple jobs held in the fast food industry at time one and did not produce any additional missing data at either time point. While the amount of missing data was relatively small and within generally accepted limits, it was important to also examine the pattern of missing data, using Missing Values Analysis in SPSS, to determine the best course for remedying the issue (Tabachnick & Fidell, 2007). Little's MCAR Test was used (Little, 1988) and the missing data were found to be missing completely at random (MCAR), $\chi^2(51) = 53.79$, $p = .37$. Therefore, cases containing missing values were excluded from non-descriptive analyses where appropriate using a listwise deletion method.

Next, the data was screened for the presence of univariate and multivariate outliers, as their treatment can improve the accuracy of estimates and significantly reduce the probability of Type I and Type II errors (Tabachnick & Fidell, 2007). As multivariate outliers often result from the presence of univariate outliers, the latter were examined first. To detect univariate outliers, scores were converted to z-scores and those < -3.29 or > 3.29 were identified as outliers. Variables with identified outliers were examined for normality and each score was examined to

determine the cause of the outlier. Several outliers were identified and each was addressed in a manner consistent with the type and use of the specific item.

First, on a question assessing the marital status of participants at time 1, few participants reported their status as married (n = 4), resulting in their identification as outliers. Given their age at time 1, the low endorsement of this item was considered to be appropriate. Therefore, this item was not modified and was used solely for descriptive purposes. Next, items assessing the number of days spent in jail (outliers; time one n = 2, time two n = 1), were modified to reflect dichotomous endorsement, as jail sentences are not uniformly assigned or carried out, and base rates of endorsement were low. Additionally, items assessing the number of symptoms of “other” (non-marijuana or –alcohol) drugs (outliers; time one n = 3, time two n = 1) were changed to dichotomous variables, as the base rate of endorsement was low. These dichotomous variables were used for descriptive analyses only.

Finally, many variables contained a small number of univariate outliers that were remedied by replacing outlying scores with a score equal to the next highest (or lowest) acceptable score, plus (or minus) one for whole numbers and .10 for rational numbers (Tabachnick & Fidel, 2007). The following variables contained a single outlier; Monthly Income (times 1 and 2), Days of Service Utilization (time one), Victimization (time two), Illegal Behavior Symptom Count (time two), Somatization (times one and two), Obsessive-Compulsive (time one), Depression (time one), Anxiety (times one and two), Psychoticism (times one and 2), Interpersonal Sensitivity (time two), Hostility (time two), and Paranoid Ideation (time two). The following variables contained two outliers; Victimization (time one), Illegal Behavior Symptom Count (time one), Days of Service Utilization (time two), Total Substance Abuse Symptoms (time two), Global Severity Index (time one), Interpersonal Sensitivity (time one), Hostility (time

one), and Phobic Anxiety (times one and two). To detect multivariate outliers, Mahalanobis distance was used, and none were detected.

Normality and linearity among variables were examined using histograms of standardized residuals as well as skew and kurtosis statistics. Using a skew and kurtosis cut-off level of 1.96 ($\alpha = .05$), a number of variables were determined to moderately violate assumptions of normality. These included Risky Sex at time 1, and the following variables at both time-points; GSI, Illegal Behavior Symptom Count, Victimization Scale, and all substance abuse outcomes. While transformation of these variables may have resulted in improved normality and greater chances of detecting relationships among variables, these clinical outcomes would become difficult to interpret meaningfully if transformed. Additionally, skew and kurtosis are expected for all of these scores given the extreme nature of their subjects and their relatively low base-rates in most populations. Finally, as regression analyses are robust to violations of assumptions of normality, no transformations were completed (Gelman & Hill, 2007; van Belle, 2008).

Finally, variables were screened for multicollinearity and singularity by examination of bivariate correlations, variance inflation factors (VIF), and tolerance statistics. There was no evidence of multicollinearity or singularity.

Sample Representativeness

With the variables screened, it was next be necessary to determine if the follow-up sample of 57 former foster youths could be considered representative of the larger first-interview sample of 265. To make this determination, the second-interview sample ($n = 57$) participants' scores on a number of first-interview variables were compared to the first-interview scores of those who were excluded from the follow-up sample ($n = 208$; Table 2). The following continuous variables were compared using independent samples t-tests: age at foster care entry, age at foster care exit,

number of foster care placements, age at interview, days spent in jail since leaving foster care, average victimization score, all BSI scale scores, total deviant behaviors, total risky sexual behaviors, alcohol abuse/dependence symptoms, marijuana abuse/dependence symptoms, other drug abuse/dependence symptoms, and total drug abuse/dependence symptoms.

Additionally, dichotomous variables were compared using chi square tests of independence. These variables assessed gender and race, as well as whether the participants graduated from high school, earned a GED, attended post-secondary education, earned an income, were charged with or convicted of a crime, were married, had children, and experienced homelessness.

Comparisons of age, gender, age of entry into foster care, and number of DHS placements did not reveal any significant differences ($p < .10$), suggesting the present sample is representative of the larger original sample. Additionally, comparisons of their lives following foster care, as well as key outcomes considered in the present study, suggest representativeness in most areas (Table 2). However, three significant differences are noted and may impact data interpretation.

First, the distribution of race was compared and found to be significantly different between the two groups, χ^2 (3, N = 265) = 7.93, $p = .05$. Further analyses indicate that the second follow-up sample contains more Caucasian (24.6% vs. 20.7%), and fewer African American (71.9% vs. 79.3%) individuals, as well as more of those identified as Hispanic and other race or ethnicity (both 0.4% vs. 0.0%). These differences were explored for the possibility that the small number of those identified as Hispanic and Other (n = 2), both interviewed for the present study, may be driving the difference between the two groups.

A dichotomized race/ethnicity variable was created to compare those identified as Caucasian with those identified as any person of color. Using this new variable in a chi square test of independence, a significant group difference was not found between those participating in the present study and those who were not interviewed, χ^2 (1, N = 265) = .40, *p* = .527. This suggests that the present sample is representative of the original in terms of race/ethnicity but data pertaining to race/ethnicity can be interpreted at a dichotomized level only.

The current study's sample was also found to contain more high school graduates (57.9% vs 36.5%). No differences were noted in GED attainment between the groups. Finally, the current sample (*M* = 2.28, *SD* = 2.54) differed from non-respondents (*M* = 1.46, *SD* = 2.71) on number of symptoms of alcohol use disorder at baseline, t(263) = -2.06, *p* = .04. The groups did not differ on symptoms of marijuana or other drug use.

Overall, comparisons between respondents and non-respondents suggest that the current sample is representative of the original on nearly all variables, with a few notable and potentially problematic exceptions discussed above. Therefore, analyses were completed and interpreted as planned, with special attention paid to results involving levels of education and alcohol use disorder symptoms.

Power Analysis

Power analyses were conducted using Gpower 3.1.9.2 statistical software (Faul, Erdfelder, Lang, & Buchner, 2007). Using the current study parameters for the second follow-up sample of 57 individuals, power statistics for a variety of desired tests ranged from .98 for dependent analyses to .59 for tests of independent samples and .74 for multivariate analyses, all at a .05 significance criterion. This indicates that non-dependent analyses are likely to be underpowered. While a power statistic of .80 or higher is preferred for psychological research, this was not possible with the

current sample, as additional participants were unavailable despite concerted effort to reach them for interview (Cohen, 1998; Ellis, 2010). Therefore, analyses were interpreted in light of this information on power.

Follow-up Periods Defined

The time periods (one and two) referenced refer to the periods between exit from foster care and first interview (time one) and time elapsed between the first and second interviews (time two). The time one interview took place an average of 1281.04 days (SD = 503.97) following foster care exit. This is equivalent to 42.70 months or 3.51 years. The time two interview took place an average of 1741.09 days (SD = 213.22) following the first interview. This is equivalent to 58.04 months or 4.77 years. The total follow-up period, taking place between exit from the foster care system and the second follow-up interview spanned an average of 3022.12 days (SD = 551.85). This can also be expressed as 100.74 months or 8.28 years. Sample characteristics were next assessed for a thorough description of the sample (n = 57) at times one and two.

Demographic Information

Sample demographic characteristics are summarized in Table 3. Analyses revealed an initial sample of youths in their late teens and early twenties (*M* = 20.74, *SD* = 1.04) with follow-up ages from the current study ranging from 24- to 28-years old (*M* = 25.81, *SD* = 1.20). The sample contained slightly more self-identified female participants (57.90%) than male, and fewer individuals who self-identified as Caucasian (24.60%) than with other racial or ethnic categories. Few (14.00%) self-identified as having “any disability”.

At time one, a small subset (7.00%) reported having ever been married, with one individual reporting a history of subsequent divorce (1.75%). At time two, eight individuals (15.80%) had been married, with one divorce reported (1.75%). Participants also reported on their parental status,

with nearly a quarter (24.60) reporting having at least one child at time one, and more than half (52.60%) reporting paternity/maternity at the second time-point.

Foster Care Experiences

Foster care responses are summarized in Table 3. Participants in the second follow-up sample (N=57) self-reported an average age of entry into the foster care system of 11.58 (*SD* = 4.20). This ranged greatly from ages 1 to 18 with a relatively normal, though slightly negatively skewed distribution. Participants self-reported an average of 4.42 (*SD* = 3.98) unique foster care placements. This also ranged significantly, with nearly one quarter (n = 14) of individuals reporting a single placement and one individual reporting 17. Slightly more than half (54.40%) of individuals reported three or fewer placements, while 80.70% reported six or fewer placements. Participants remained in foster care for an average of 6.28 years (*SD* = 4.23) and exited before the expiration of their benefits, at 18-years, with an average age at exit of 17.86 (*SD* = 1.14).

Housing

Housing outcomes are summarized in Table 4. During the first time period, nearly half (47.37%, n = 27) of the 57 participants reportedly spent at least one night homeless. Of those, nine (15.79%) met the definition for literal homelessness while the remaining 18 (31.58%) were considered precariously housed. On average, participants spent 202.11 days, or 16.87% of the first follow-up period, homeless. Time spent literally homeless (9.33 days) was lower than the 189.51 average days spent precariously housed.

During the second time period, 17 (29.82%) participants reported some period of homelessness, representing 6.69% (*M* = 152.77 days) of the follow-up period between their first and second interviews. During this period, five (8.77%) of the participants met criteria for literal homelessness and 12 (21.05%) were considered precariously housed. The average number of days

spent literally homeless was 10.30 (0.66%) while the average days spent precariously housed was 142.47 (15.98%).

As some individuals were both precariously housed and literally homeless, sometimes at both time points, it is important to look at totals across time points to gain the clearest understanding of the housing realities of participants. A total of 33 (57.89%) of participants experienced homelessness during one or more of the follow-up periods, and of those, 11 (19.30%) individuals were homeless at least one night during both of the periods covered by the interviews. The total average number of days participants spent homeless across the entire follow-up period was 354.88, nearly one year, representing 10.80% of their time.

On average, 19.63 of those days were spent literally homeless (0.53% of elapsed time) while the remaining 331.98 (7.91% of elapsed time) were spent precariously housed. Across the follow-up periods, 12 (21.05%) participants experienced literal homelessness and 21 (36.84%) additionally experienced precarious housing. Across the follow-up periods, fewer than half of participants (42.10%, $n = 24$) reported being continuously and stably housed.

Dependent t-tests were completed to compare days and percentages of time spent homeless at each time point. There was a significant difference between the percentage of time spent homeless during time one ($M = 16.87$, $SD = 24.74$) and time two ($M = 6.69$, $SD = 16.09$), $t(56)=2.66$, $p = .01$. No differences were found between the percent of time spent precariously housed during time one ($M = 15.98$, $SD = 24.49$) and time two ($M = 7.91$, $SD = 21.94$), $t(56)=1.87$, $p = .07$. Additionally, differences were not found between the percent of time spent literally homeless at time one ($M = 0.66$, $SD = 2.44$) and time two ($M = 0.53$, $SD = 2.48$), $t(56)=.27$, $p = .79$.

Further analyses revealed the most common types of housing across time points (Table 5). Participants reported an average of 4.25 housing arrangements between their exits from foster care and their first interview. This mobility remained relatively consistent between the first and second interviews, with an average number of housing events (moves to a different housing arrangement) of 3.84, for a total average of 8.09 living arrangements across the entire follow-up period.

The most common living arrangement was living in one's own home or apartment, representing 39.05% of all housing events. Also common were living with relatives (16.92%), biological parents (12.15%), and friends (11.06%). Additional housing arrangements less frequently reported included living with a partner (5.42%), in university housing (3.69%), in a supervised setting (2.17%), in a correctional institution (1.30%), or in military housing (1.08%). Though living with others was relatively common, returning to living with a former foster family member was not, representing just three housing arrangements across all 57 participants over the full 8-year follow-up period (0.65%).

Other than living in one's own dwelling, the remaining types of housing may or may not have been self-characterized as a precarious housing situation, depending on a participant's perception of their alternate housing options. In addition to these potentially precarious arrangements, some participants reported situations which are consistently categorized a literal homelessness, including living on the street (1.52%), in a shelter (1.30%), car (1.08%), or abandoned building (0.22%).

The self-reported reasons for homelessness were assessed for a better understanding of the pathways to housing difficulties faced by these youths. During the first time period, participants most frequently cited job loss and/or a lack of employment options (n = 27) as the key reason for their period of homelessness. Trouble with family (n = 16), lack of affordable housing (n = 10),

eviction (n = 9) and mental illness and/or personal crises (n = 9) were next cited. Two individuals mentioned alcohol and/or drug use as the key precipitating factor, and one listed domestic violence. During the second follow-up, a lack of affordable housing (n = 14) was most frequently cited, followed by job loss and/or lack of employment (n = 10), trouble with family (n = 4), mental illness and/or personal crisis (n = 4), and the disruption of a personal relationship (n = 2).

The difficulties cited which reportedly led to episodes of homelessness can be encapsulated by three categories: financial, interpersonal, and health. Across both follow-up periods, financial difficulties were listed as the key reason for an episode of homelessness 65.14% of the time. Interpersonal difficulties (21.10%) and health difficulties (13.76%) comprising far fewer of the self-reported key reasons given.

Education

Educational outcomes are summarized in Tables 6 and 7. Overall, 84.21% (n = 48) of 57 participants graduated from high school, 57.89% (n = 33) by the time of the first interview, and an additional 26.32% (n = 15) at the time of the second interview. Participants also earned General Equivalence Degrees (GED; 35.09%, n = 20). Of note, some individuals earned both their GED and high school diploma. At the time of the first interview, 33.33% (n = 19) had completed some college education, and at the time of the second interview, a total of 57.89% (n = 33) had completed some college coursework. To aid in their educational endeavors, a total of 45.61% (n = 26) received financial aid during one or both follow-up periods. Over their lifetimes, 15.79% (n = 9) reportedly received some kind of special education. A minority 14.04% (n = 8) did not earn their high school diploma or an equivalence degree during the follow-up period.

Types of education experienced since leaving foster care are summarized in Table 7. The most common type of education obtained by participants across the follow-up periods was

technical or vocational in nature (accounting for 94 of the 379 total reported educational experiences). Many (accounting for 86 of the 322 educational experiences at time one) attended secondary schools, particularly during the first follow-up period, when participants were mostly in their early 20s. Adult education, universities and community colleges were all regularly attended, with several individuals attending multiple types of higher education during the follow-up period. On average, youths engaged in 6.65 educational experiences during the follow-up period, suggesting frequent changes in their educational setting, particularly earlier on.

Employment and Income

Income-related outcomes are summarized in Table 8. Using timeline data of participants' employment and income since exiting foster care (time one) and between the first and second interviews (time two), average incomes (daily, monthly and yearly) were computed for each source of income (employment, public assistance, and illegal activities). Averages were computed only for the days worked and included only those who reported each type of income. It is important to note that some individuals reported multiple sources of income during the same time period from multiple jobs and/or the addition of public assistance funding, and averages were calculated to account for multiple sources of income when they occurred.

The majority of youths reported at least some periods of employment (time one n = 50, 87.72%; time two n = 48, 84.21%). Seven (12.28%) youths did not report income from employment at time one, nine (15.79%) did not at time two, and four of these individuals did not report income from employment at either time point (of these, two reported income from public assistance).

Additionally, the majority of youths experienced at least one period of unemployment (91.23% at time one and 89.47% at time two). For the youths, unemployment was commonplace.

At time one, youths were employed an average of 59.31% of the follow-up period (*M* = 794.70 days, *SD* = 499.17), spending an average of 40.69% (*M* = 545.30 days, *SD* = 452.60) of the period between foster care and the first interview unemployed. At time two, the youths were employed an average of 52.29% of the follow-up period (*M* = 910.39 days, *SD* = 648.55), spending an average of 47.71% (*M* = 830.70 days, *SD* = 705.38) of the time between the first and second interviews unemployed.

When employed, their average monthly salary for the first interview period was $772.31 (*SD* = 484.98) and for the second this number increased to $1160.85 (*SD* = 910.66). This can also be expressed as $9395.10 (5902.05) yearly for time one and $14,121.85 (11,081.40) for time two. Table 8 further contains the US Poverty Guidelines (US Department of Health and Human Services, 2017) for the year in which interviews began at each time point. At their initial interview, participants reported a yearly income from employment that did not exceed the poverty guideline of $9570 for a single person. The addition of dependents would place the average aged-out youth below the guideline by thousands of dollars. At the first time point, 24.60% of the sample reported having at least one child.

At the second interview, the average yearly income reported exceeded the poverty guideline ($10,830 for a single person) by $3291.85. However, at the second interview, 52.60% of participants reported having at least one child. Given this, the poverty guideline was minimally set at $14,570 per year, an income not exceeded by the average participant. A dependent samples t-test comparing monthly incomes from employment, over time, indicated a significant increase in income between times one (*M* = 802.72, *SD* = 499.70) and two (*M* = 1117.93, *SD* = 796.30), $t(44)=-3.45$, $p = .001$.

Former foster youths further reported income from public assistance (time one n = 22, 38.40%; time two n = 29, 50.88%), sometimes in addition to other sources of income. When receiving public assistance, the youths averaged \$269.63 per month (*SD* = 151.09) or \$3281.35 (*SD* = 1839.60) per year during the first time period. This increased to \$1156.39 (*SD* = 3731.75) per month or 14,070.75 (*SD* = 45,402.35) yearly, during the second time period. A dependent samples t-test examined potential differences in monthly income from public assistance across the two interviews (time one *M* = 160.32, *SD* = 176.99; time two *M* = 906.36, *SD* = 3326.29) and a significant difference was not indicated, $t(36)=-1.36$, $p = .18$.

Using an independent samples t-test, monthly income from public assistance for men (time one *M* = 316.75, *SD* = 203.77; time two *M* = 2186.49, *SD* = 5506.19) and women (time one *M* = 251.96, *SD* = 129.99; time two *M* = 319.44, *SD* = 271.54) were compared and not found to differ significantly, time one $t(20)=0.89$, $p = .38$ and time two $t(27)=1.36$, $p = .19$. Similarly, Caucasians (time one *M* = 320.61, *SD* = 175.99; time two *M* = 364.87, *SD* = 339.10) and persons of color (time one *M* = 258.30, *SD* = 148.28; time two *M* = 1283.04, *SD* = 4013.90) were not found to differ significantly on income from public assistance.

Additionally, some youths (time one n = 3, 5.26%; time two n = 1, 1.75%) reported income from illegal activities such as dealing drugs, illegal sales, and prostitution. These youths averaged \$1143.83 income per month (*SD* = 835.12) or \$13,917 (*SD* = 10,161.60) per year during the first time period. At time two only one participant reported income from illegal activities (drug sales). Therefore, further analyses were not possible.

Employment settings were analyzed (Table 9) for frequency, as well as average changes in employment setting across each follow-up period. Individuals held an average of 2.74 jobs during the period following foster care to their first interview. Participants reported an average of 2.87

jobs between their first and second interviews. Over the total follow-up period, the average number of jobs held was 5.62 (across 8.23 years).

The types of jobs (Table 9) held by the youth at each time point were examined. Overwhelmingly, across both follow-up periods, employment in the service/hospitality sector was most common, accounting for 57.62% and 47.47% of all jobs held at time points one and two, respectively. Service/hospitality jobs included working in the fast food industry, hotels, customer service, driving (bus or taxi), cosmetology, bartending and serving tables, among others. Additionally, jobs in labor/manufacturing were relatively common, accounting for 17.22% and 18.99% of all reported jobs at the first and second time points. These jobs included those who worked on assembly lines, pickers, packers, janitors, truck drivers, and unskilled labor. Jobs in sales (13.81% of jobs at time one and 6.96% of jobs at time two) were somewhat common, and included telemarketing, direct sales, and traditional sales.

Some youths additionally worked in healthcare (4.64% of jobs at time one and 10.13% of jobs at time two), and these were comprised of jobs as health aids. Further, few jobs were categorized into skilled blue collar and white collar professions. These included welders, brickmasons, entertainers/artists, carpenters, managers (mostly sales and restaurant), bankers, an architect, and an accountant. Finally, few jobs were reported which are illegal in nature, including drug sales and prostitution. While these jobs were often brief, one individual reportedly worked as a drug dealer across both time points.

Legal Difficulties

Participants were asked to recall any past criminal involvement that resulted in charges, convictions or jail time (Table 10). At time one, 22.80% (n = 13) of participants reported a history of criminal charges and/or convictions. The majority, 19.30% (n = 11), of these individuals

reported that they had spent some time in jail since exiting foster care. Jail time ranged from a single day (n = 3) to 277 days (n = 1) with the majority (n = 7) serving less than one month. The most common crimes reported were theft (n = 2), driving under the influence (DUI; n = 2), and driving with a suspended license (n = 2). Other crimes reported include contempt of court, fleeing and evading the law, trespassing, carrying a concealed weapon (knife), and truancy (for running away from a foster home).

At time two, 12 individuals (21.10%) reported a history of criminal charges and/or conviction, with all of them serving some time in jail. The majority served one day (n = 5) and one individual served 358 days in jail. All but the latter individual served 14 or fewer days in jail. The most common crimes reported were possession or manufacture of illegal substances (n = 5), driving without a valid license (n = 3), DUI (n = 2), and reckless driving (n = 2). Additional charges (n = 1) included battery, theft, filing a false police report, animal cruelty, and disorderly conduct.

Criminal activity over the full span of time between foster care exit and the second interview was also assessed to determine the number of unique individuals involved with the legal system, accounting for recidivism. Two individuals were reportedly charged with and/or convicted of criminal activities during both the first and second assessment periods, making the total number of individuals ever charged and/or convicted 23 (40.40%). Only one individual reported having spent time in jail during the first and second time periods, making the total number of participants with a history of jail time 22 (38.60%).

Chi square tests of independence were performed to determine if a significant association existed between gender and legal difficulties across both observation periods. A significant association between gender and having been to jail since foster care exit was observed, $\chi^2(1) = 4.24$, $p = .04$, such that men were more likely to spent time in jail during the study period. A

significant association between gender and having been convicted or charged with an offense was not observed across the total observation period, $\chi^2(1) = .52$, $p = .47$. A chi square test of independence was also performed to determine if significant associations were observed between race/ethnicity and legal difficulties. Across the two observation periods, an association between race/ethnicity and having spent time in jail was not observed, $\chi^2(1) = 2.69$, $p = .10$.

Deviancy

Information on the deviant behaviors endorsed at each time point can be found in Table 11. A dependent measures t-test was used to compare Illegal Behavior Symptom Count (IBSC) scores for times one ($M = 2.91$, $SD = 3.16$) and two ($M = 1.50$, $SD = 1.26$), $t(56)=3.18$, $p = .002$, indicating a significant decrease in scores over time. At time one, 15.79% (n = 9) endorsed six or more symptoms at time one, indicative of clinically significant deviant behaviors, with four individuals scoring ten and above. At time two, the mean and standard deviation were lower, placing the threshold for significant deviance at 3 or more endorsed symptoms. Eleven individuals (19.30%) endorsed three or more symptoms. Of note, no person's score at time two exceeded the threshold for significance set at the first time period, as the highest scores was five.

The most frequently endorsed behaviors (Table 11) across time points were those indicating pervasive irresponsibility (endorsed by 52.63% at time one and 40.35% at time two), including skipping work or school, defaulting on debt, and being fired from multiple jobs. Theft and deceit, including habitual lying, shoplifting, and stealing from roommates, was also particularly common (47.37%) at the first interview, and continued to be common among participants at the second interview (29.82%).

Acts of aggression endorsed included fighting, using weapons, and physical cruelty. At time one, 26.32% endorsed one or more of these behaviors, and this decreased to 12.28% at time

two. Least endorsed, 15.79% at time one and 5.26% at time two, were destructive behaviors such as destroying property and arson. Finally, some youths endorsed items which represent serious violations of the law. These included rape, fraud, extortion, pimping, and prostitution. During the first interview, nearly 20% (19.30%) endorsed one or more of these behaviors, and during the second interview 15.79% endorsed one or more.

Service Utilization

Participants' service utilization for each time period is summarized in Table 12. Dependent t-tests were utilized to determine that no significant differences were indicated between the total number of days using no services at time one (M = 160.56, SD = 330.61 and time two (M = 177.35, SD = 236.81), t(56)=, -.36, p = .72, as well as the total percent of days services were utilized at time one (M = 0.14, SD = 0.31) and time two (M = 0.10, SD = 0.13), t(56)=1.07, p = .29. The later analysis was utilized to account for differences in the time since exiting foster care and the time between the first and second interviews.

Independent t-tests were utilized to assess the association between gender and service utilization. During the first observation period, differences in the percentage of days of service use in men (M = 0.09, SD = 0.37) and women (M = 0.18, SD = 0.37) were not observed, t(55)=-1.09, p = 28. At time two, a significant association between gender and percentage of days of service use was observed, t(55)=-2.75, p = .01, such that men (M = 0.05, SD = 0.08) utilized services for fewer days than did women (M = 0.13, SD = 0.14). Independent t-tests were additionally used to assess the association between race/ethnicity and percentage of time where services were utilized. Significant associations were not indicated between Caucasians (time one M = 0.11, SD = 0.19; time two M = 0.06, SD = 0.09) and people of color (time one M = 0.15, SD = 0.35; time two M = 0.11, SD = 0.14) at times one, t(55)=-.48, p = 63, or two t(55)=-1.18, p = .24.

As indicated in Table 12, the majority (93.00% at time one, 84.20% at time two) of participants utilized at least one service during the follow-up periods. Most commonly utilized were medical services (87.70% at time one, 70.20% at time two), family independence agencies (43.90% at time one, 42.10% at time two), child care or services (24.60% at time one, 42.10% at time two), formal psychological and substance use services (24.6% at time one, 19.30% at time two) and transportation (19.30% at time one, 21.10% at time two). Small numbers of participants also reported utilizing temporary housing support (14.00% at time one, 5.30% at time two), outreach and drop-in centers (5.30% at time one, 1.80% at time two), soup kitchens (12.30% at time one, 12.30% at time two), self and peer help (8.80% at time one, 10.50% at time two), and subsidized housing (7.00% at time one, 14.00% at time two).

As each individual service variable reported here was found to be heavily skewed and often contained very few endorsements, comparisons were not completed to determine if significant changes in individual services were present over time. However, Table 12 contains additional information about the parametric statistics of each service type used among only respondents who identified themselves as utilizers of that service.

While the majority of individuals did not utilize a given service (with the exception of medical services, as noted above), those utilizing services often varied widely in their number of days used, often with a minority indicating significant use while the remainder indicated less than one week per service. Additionally, those utilizing a given service at time one were often not the individuals reporting using the service at time two, suggesting time-limited service utilization rather than continued utilization of the majority of services.

Psychological Distress

BSI scores were calculated according to Derogatis (1993) and raw scores for all scales were compared to the adult non-patient normative sample as well as mean scores from a sample of 128 low-income young adults (Fowler & Toro, 2006). Outcomes pertaining to psychological distress are summarized in Table 13.

Average time one Global Severity Index (GSI) score was higher than those of the normative sample and low-income comparison groups. The average time one GSI score (M = .55, SD = .61), indicating overall level of psychological distress, was nearly double the two comparison group scores (.30 for the adult norms and .28 for the low-income youths), suggesting high levels of distress which are not solely accounted for by the difficulties brought on by poverty or emerging adulthood. The average GSI score for the second interview (M = .41, SD = .45) also fell well above the two comparison group averages, suggesting continued heightened levels of distress over time. A dependent samples t-test of GSI scores across the two interviews did not indicate a significant difference in scores of aged-out youth, $t(56)=1.27$, p = .21.

GSI scores were further converted to standardized t-scores using both the adult outpatient and adult non-patient norms, per appropriate gender. Scores of t = 63 or greater indicated clinically significant levels of distress in comparison to the normative samples. Compared to the adult outpatient norms, two individuals (3.51%) at time one and none at time two met criteria for experiencing clinically significant psychological distress. However, as these aged-out youths were not explicitly sampled for their clinical presentations, comparison to a clinical normative sample yields the most conservative estimate of distress and primarily serves to indicate that two individuals at time one scored in clinically significant range even compared to those who seek outpatient psychological services. Comparisons to the adult non-patient norms identified far more individuals with clinically significant levels of psychological distress. At time one, 18 (31.58%)

individuals scored t63 or above, and at time two, 11 (19.30%) individuals met criteria for clinical significance.

BSI subscales provided additional information regarding the specific types of distress most commonly reported by the youths at each time point. At the first time point, all mean clinical subscale scores were elevated in comparison to the adult normative and low-income samples. At the second time point, this remained true of most subscales, with the exception of Anxiety and Somatization. At both time points, the mean Paranoid Ideation subscale scores were highest (.95 at time one and .65 at time two), and higher than the adult normative (*M* = .34) and low-income (*M* = .43) comparison groups. This indicates that youths acknowledged higher scores for symptoms such as “feeling that others cannot be trusted” or “feeling that people will take advantage of you if you let them.”

Additionally, elevations in the Psychoticism subscale were notably high for times one (*M* = .33) and two (*M* = .54) when compared to the adult normative (*M* = .15) and low-income (*M* = .22) groups. This subscale includes items associated with classic symptoms of psychotic disorders, such as “the idea that someone else can control your thoughts” as well as associated features, captured by items such as “feeling lonely even when you are with people” and “never feeling close to another person.”

Depression subscale scores were additionally elevated across the first (*M* = .55) and second (*M* = .41) interview periods when compared to the adult normative (*M* = .28) and low-income (*M* = .27) comparison groups. The Depression subscale addresses experiences of sadness, loneliness, and anhedonia, which are often present in individuals with diagnosed mood disorders, but are also experienced by most individuals to a lesser degree.

Dependent t-tests compared time one and two subscale scores for potentially significant changes in mean scores over time. While scores appeared to decrease over time for all subscales except Psychoticism, and this may indicate clinically meaningful changes in symptoms and levels of distress, the Paranoid Ideation scale (time one $M = .95$, $SD = .94$; time two $M = .65$, $SD = .70$) was the only one to change to a statistically significant degree, $t(56)=2.11$, $p = .04$.

A clinical interpretation of the mean profile suggests that many aged out youths experience feelings of loneliness and isolation, perhaps related to their heightened mistrust and avoidance of others. Additionally, elevated scores on Hostility (time one $M = .68$; time two $M = .48$) and Interpersonal Sensitivity (time one $M = .52$; time two $M = .46$) are likely to hinder these youths in a number of social spheres, including as romantic partners, employees, parents, and friends, further contributing to their isolation.

Youths reported high levels of overall distress and were likely to experience frequent sadness and/or feelings of numbness. The clinical profile at time two is slightly more optimistic, with scores trending downward in the direction of improved mental health and decreased distress. However, the key scales interpreted above all remained elevated, suggesting a pattern of pervasive distress over time.

Victimization

Victimization scores are summarized in Table 14. A dependent measures t-test was used to compare Victimization scale scores for times one ($M = 1.34$, $SD = .41$) and two ($M = 1.28$, $SD = .37$), $t(56)=0.93$, $p = .36$. Results suggest no significant change in victimization scores across the two assessment periods. For time one, scores of 1.75 or greater indicated high levels of victimization, while the cut-off was slightly lower at 1.65 for time two. During the first follow-up

period, 17.54% (n = 10) endorsed high levels of victimization and during the second follow-up period, 12.28% (n = 7) experienced high victimization.

Independent samples t-tests were completed to examine the relationship between gender and victimization. At time one, men (M = 1.34, SD = .41) and women (M = 1.34, SD = .41) had nearly identical average total scores, t(55)=-0.06, p = .95. Findings were similarly nonsignificant for the second time-period, with men (M = 1.23, SD = .06) and women (M = 1.31, SD = .41) scoring similarly on overall victimization scores, t(55)=-0.77, p = .45. Additional independent samples t-tests were completed to examine the relationship between race/ethnicity and victimization. For the first time period, Caucasians (M = 1.35, SD = .37) and people of color (M = 1.33, SD = .42) were not found to differ on scores of victimization, t(55)=.09, p = .93. Similarly, Caucasians (M = 1.16, SD = .22) and people of color (M = 1.31, SD = .40) did not differ significantly on total victimization scores at the second follow-up, t(55)=-1.33, p = .18.

Specific types of victimization were next analyzed. At time one, violent victimization (i.e. being robbed, threatened with a weapon; M = 5.18, SD = 1.75) was somewhat more prevalent than sexual victimization (i.e. rape, sexual coercion; M = 3.61, SD = 1.59). Time two scores of violent (M = 4.95, SD = 1.69) and sexual (M = 3.51, SD = 1.07) were similar to the first time point.

Independent samples t-tests were completed to analyze potential relationships between gender and specific types of victimization. Men (time one M = 5.50, SD = 1.89; time two M = 4.83, SD = 1.05) and women (time one M = 4.94, SD = 1.64; time two M = 5.03, SD = 2.05) did not differ significantly on scores of violent victimization at time one, t(55) = 1.19, p = .24, or time two, t(55)=-0.43, p = .67. However, women (time one M = 4.00, SD = 2.00; time two M = 3.79, SD = 1.32) and men (time one M = 3.08, SD = .28; time two M = 3.13, SD = .34) differed

significantly at times one, t(55)=-2.22, p = .03, and two, t(55)=-2.40, p = .02, such that women reported more sexual victimization.

Independent samples t-tests were completed to analyze potential relationships between race/ethnicity and specific types of victimization. Caucasians (time one M = 4.50, SD = .76; time two M = 4.57, SD = 1.02) and persons of color (time one M = 5.40, SD = 1.93; time two M = 5.07, SD = 1.86) did not differ significantly on scores of violent victimization at time one, t(55)=-1.69, p = .10, or time two, t(55)=-0.96, p = .34. Similarly, Caucasians (time one M = 3.07, SD = .27; time two M = 3.21, SD = .80) and persons of color (time one M = 3.80, SD = 1.79; time two M = 3.60, SD = 1.14) did not differ on sexual victimization at time one, t(55)=-1.49, p = .14, or time two, t(55)=-1.90, p = .24.

Among the most frequently endorsed types of experienced trauma during the first time period were; being beaten up (24.6%), robbed (26.3%), sexually coerced (19.3%), coerced into breaking the law (28.1%), and going a day without eating due to a lack of access (29.80%). The more commonly endorsed types of victimization during the second follow-up period included; being robbed (24.56%), sexually coerced (22.81%), threatened with a weapon (19.30%), and going a day without eating due to a lack of access (31.58%).

Risky Sexual Behaviors

Risky Sexual Behavior (RSB) Scale responses are summarized in Table 15. Total scores for times one (M = 8.05, SD = 3.83) and two (M = 7.61, SD = 3.44) were compared using a dependent t-test. Results revealed no significant difference in RSB scores across the two assessment periods, t(56)=-0.79, p = .43. At time one, scores, ranged from zero to 15 and at time two, scores ranged from zero to 13.

The majority of participants reported being sexually active at both the first (n = 50, 87.72%) and second (n = 48, 84.21%) interviews. Independent samples t-test determined that men (time one $M = .92$, $SD = .28$; time two $M = .87$, $SD = .34$) and women (time one $M = .85$, $SD = .36$; time two $M = .85$, $SD = .36$) did not significantly differ in this regard at times one, $t(55)=.77$, $p = .47$, and two, $t(54)=.22$, $p = .83$. The majority of participants reported engaging in oral sex at time one (63.16%) and time two (75.44%). Additionally, many youths reportedly engaged in anal sex during the first (21.05%) and second (26.32%) time periods.

While anal and oral sex are not necessarily risky activities, youths also reported engaging in a number of overtly risky sexual behaviors at each time point. Most commonly reported was engaging in sex while intoxicated, which occurred in nearly half of the sample at times one (49.12%) and two (45.61%). Youths also reportedly engaged in transactional sex, exchanging sexual favors for money (14.04% at time one and 24.56% at time two) and for drugs (3.51% at time one and 19.30% at time two). Finally, youths reportedly engaged in sex with partners who can be considered higher risk due to IV drug use (5.26% at time one and 21.05% at time two) and positive HIV/AIDS status (0% at time one and 19.30% at time two).

The number of sexual partners ranged significantly during the first time period ($M = 9.25$, $SD = 15.60$), from zero (n = 7) to 20 or more (n = 8). During the second time period ($M = 1.55$, $SD = 1.25$), the majority (57.90%, n = 33) reported a single sexual partner, and the number of partners ranged from zero (n = 2) to 8 (n = 1). A dependent samples t-test was conducted to compare the number of reported sexual partners across the two interview periods, and results indicated a significant decrease in number of partners over time, $t(50)=3.68$, $p = .001$.

A dependent samples t-test was utilized to determine if sexual frequency changed significantly between time one ($M = 2.54$, $SD = .86$) and time two ($M = 2.26$, $SD = .90$), and no

significant difference was indicated, $t(44)=1.83$, $p = .07$. The frequency of sexual activity for times one and two indicate that the majority of individuals report having sex several times per week (time one n = 18, 31.60%; time two n = 17, 29.80%) or multiple times per month (time one n = 20, 35.11%; time two n = 22, 38.61%). Fewer reported having sex almost daily (time one n = 7, 12.34%; time two n = 3, 5.31%) or very rarely (a few times per year; time one n = 0; time 2 n = 6, 10.57%). Still fewer characterized themselves as abstinent (time one n = 0; time two n = 2, 3.51%). Independent samples t-tests analyzed potential relationships between gender and self-reported frequency of sexual activity.

Participants were asked about the pregnancy history of themselves and their partners, as this is one potential consequence of risky sex, though pregnancy is not in itself a negative outcome for many individuals. At the first time point, a sizable minority (42.11%) reported that they had either been pregnant or had impregnated a partner since exiting foster care. Of the 24 who reported a pregnancy during the first time period, nine (15.79%) reported having sought an abortion to end at least one pregnancy, suggesting that for at least some individuals, the pregnancy had been either unintended or untenable. Frequencies indicate that relatively equal numbers of men (n = 5) and women (n = 4) reported a history of abortion for themselves or a partner since leaving foster care. During the second interview period, far fewer individuals reported having been pregnant (5.26%) and none endorsed having had an abortion for themselves or a partner.

Foster youths were asked to report on the frequency with which they utilized any method of birth control at each interview (Table 15). At the first interview, the majority of youths reportedly used birth control consistently (24.56%) or at least 75% of the time (29.82%) while 16 reportedly utilized it less than 75% of the time and only three (5.26%) reported no use of birth control. At the second interview, these numbers shifted somewhat. A sizable minority (n = 25,

43.86%) reported perfect or near-perfect (75% of the time or greater) use of birth control, while an additional nine (15.79%) reported inconsistent use and 28.07% reported that they never utilize birth control. Use of birth control at time one (M = 3.38, SD = 1.56) and time two (M = 2.74, SD = 2.18) were compared using a dependent samples t-test, and use was found to decrease significantly over time, t(44)=2.16, p = 04.

Similarly, youths were asked to describe their frequency of condom use (Table 15), specifically because condoms are a barrier method, providing the best protection against sexually transmitted infections (STIs) while also preventing pregnancy. At the first interview, 26 (45.61%) youths reportedly used condoms at least 75% of the time, while 19 (33.33%) reported inconsistent use below 75% and five individuals (8.77%) reported never using condoms. At time two, 18 (31.58%) reported high levels of condom use of at least 75% of the time, 14 (24.56%) reported less frequent use of less than 75% of the time, and 40.35% reportedly never used condoms. A dependent samples t-test, comparing times one and two, revealed a significant decrease in condom use over time, t(44)=2.89, p = .01.

As a consequence of sometimes risky sexual activity, youths were asked to report their STI histories, including specific infections. The majority at time one (61.40%) and two (73.68%) reportedly received testing for HIV. None of the youths in this sample reported having received a positive HIV screening result. Overall, a sizable minority at times one (19.30%) and two (12.28%) reported contracting at least one STI. Chlamydia was the most commonly reported STI, followed by Gonorrhea, Trichomoniasis, and Genital Herpes.

Substance Use

Youths were asked a number of questions regarding their substance use during each follow-up period (Table 16). During the first interview period, nearly half (45.60%) of participants did

not endorse any symptoms of alcohol abuse/dependence, and endorsements ranged from 1 item to 10 across the remaining participants. At time two, 19.30% did not endorse any symptoms of alcohol abuse/dependence, while the remaining respondents endorsed between 1 and 12 items.

At the first interview, nearly half of participants (47.40%) scored in the clinically significant range for alcohol abuse/dependence symptoms. At time two, this number was slightly less at 36.80%. A dependent samples t-test compared alcohol use totals at times one ($M = 2.28$, $SD = 2.54$) and two ($M = 2.86$, $SD = 2.87$), and symptoms were not found to differ across the two time periods, $t(56)=-1.07$, $p = .29$.

The majority of youths reported having consumed alcohol during the first (n = 42, 73.68%) and second (n = 44, 77.19%) time periods. While this was not included in calculations of alcohol abuse/dependence symptoms, it is worth noting that 45.61% (n = 26) of the time one sample was not yet old enough to drink legally. Few youths endorsed binge drinking (time one n = 2, time two = 4), but many reported difficulties related to their alcohol use. Many (time one n = 14, time two n = 12) reported becoming physically sick from drinking alcohol, and several (time one n = 9, time two n = 12) reported that they had given up drinking but had returned to it at least once during the follow-up period, suggesting that they experiences problems related to drinking and abstained for a period.

Less frequently, youths endorsed the following as a result of their alcohol consumption; getting into trouble (time one n = 7, time two n = 4), experiencing problems at work or school (time one n = 3, time two n = 4), and problems getting along with others (time one n = 4, time two n = 6). A significant minority reportedly operated a vehicle while inebriated (time one n = 16, 28.07%; time two n = 9, 15.79%). Finally, some youths reported that they had attended self-help

meetings, such as Alcoholics Anonymous, in an effort to help them deal with their perceived alcohol problems (time one n = 3, time two n = 2).

Nearly half (49.10%) of participants at time one did not endorse any symptoms of marijuana abuse/dependence, while the remaining half endorsed between 1 and 8 symptoms. Similarly, at time two, a majority (68.40%) did not indicate symptoms of marijuana abuse/dependence, while the remaining scores ranged from 1 to 10 symptoms. Dependent t-tests failed to indicate significant changes in endorsed symptoms of marijuana use across the two follow-up periods as well. At time one, participants endorsed an average of 1.61 (SD = 2.21) symptoms of marijuana abuse/dependence, while at time two participants endorsed an average of 1.16 (SD = 2.24) symptoms, $t(56)=1.01$, p = .32. Nearly a quarter (24.60%) met criteria (3+ symptoms) for significant difficulties resulting from marijuana use at time one, and 19.30% met this criteria at time two.

The majority of youths reported having used marijuana during the first (n = 29, 50.88%) time period. During the second time period, this number dropped to just over one quarter of youths (n = 15, 26.32%). Several youths (time one n = 13, time two n = 9) reportedly abstained from marijuana use for a period before returning to it, suggesting negative consequences impacted their experience of their use, at least temporarily.

Additionally, some youths reported experiencing the following difficulties related to their marijuana use; getting into trouble (time one n = 5, time two n = 2), problems at school or work (time one n = 1, time two n = 2), difficulty getting along with others (time one n = 2, time two n = 2), and becoming physically ill from use (time one n = 4, time two n = 2). A significant minority further reported that they had operated a vehicle while high on marijuana (time one n = 15, 26.32%; time two n = 9, 15.79%). Finally, one individual at time one and three at time two, reported that

they sought self-help services, such as Alcoholics and/or Narcotics Anonymous, to help them to address difficulties related to marijuana use.

As previously discussed, endorsement of other drug use was low and these variables were transposed to dichotomously reflect endorsement, rather than number of symptoms. The majority (time one = 84.20%, time two = 96.5%) of individuals did not endorse symptoms of abuse or dependence for drugs other than alcohol or marijuana. The most common type of other drug reportedly used was ecstasy (MDMA, “X”), which was reported by seven (12.28%) participants at the first time point and one at the second. Additionally, individuals reported some use of stimulants (“uppers”, diet pills, “speed”, psychostimulants, Ephedrine, Preludin) at the first time point (n = 2), but not at the second. Similarly, two individuals reported use of cocaine (“crack”) at time one, whole none reported its use at time two.

Tranquilizers (Valium, GHB, Ketamine, Rohypnol, Librium, Ativan, Xanax), hallucinogens (mushrooms, etc.), and opioids (Heroin, Morphine, Methadone, Codeine, Vicodin) were each endorsed once at each time period. Finally, two individuals at the first interview identified their use of antipsychotics (Seroquel and Zyprexa) for recreational purposes, and none identified additional drugs at the second interview. The use of “downers” (sleep aids, barbiturates, Quaaludes, Seconal, Tuinal, Nembutal) was not reported by this sample at either time point.

Finally, the totals of endorsed substance abuse/dependence symptoms, across all assessed drugs, were compared across times one and two using a dependence samples t-test. Scores were not found to significantly differ between the two times points (time one $M = 4.18$, $SD = 4.59$; time two $M = 3.77$, $SD = 3.80$), $t(56)=0.48$, $p = .64$. Many (36.80%) individuals did not endorse any symptoms of substance abuse or dependence at time one, with the remaining endorsing between

one and 16 items. At time two, 19.30% of participants did not endorse any symptoms of substance abuse or dependence, with the remaining individuals endorsing between one and 13 items.

Multivariate Multiple Regression Analyses

A series of multivariate multiple regressions analyzed the unique effect of a number of key predictor variables on the outcomes of aged-out youths (N = 57) at each time period. Each controlled for the length of time elapsed between foster care and the interview in question, to ensure that when they were interviewed was not responsible for found effects.

The first analysis used gender, race (dichotomized), number of years in foster care, number of foster care placements, the age at foster care exit and total victimization score from time one to predict time one average monthly income, housing vector and education vector. The results of these multivariate analyses revealed no significant ($p < .05$) multivariate main effects for years in foster care, number of foster care placements, age at foster care exit, victimization, gender, or race.

The above analysis was completed once more on time two data, using all of the same variables except victimization, which this time came from the second interview, to predict time two housing, education and monthly income. Multivariate multiple regression analyses revealed one significant multivariate main effect for race, Wilks $\lambda = .80$, $F(3, 37.00)=3.05$, $p = .05$, partial eta squared = .20. Power to detect the effect was .67. Box's M test was non-significant, $p = .12$. Given the significance of the overall test, the univariate main effects were examined. A significant univariate main effect for race was obtained for education, $F(1, 44)=4.26$, $p = .05$, partial eta square = .10, power = .52. Significant pairwise differences were obtained in educational outcome such that the mean obtained by Caucasians ($M = .77$, $SD = .44$) was higher than that obtained by persons of color ($M = .46$, $SD = 78$) at the second time point.

For time one, 7.14% of Caucasians and 30.23% of persons of color had not attained a high school diploma or equivalent degree. Additionally 35.71% of Caucasians and 44.18% of persons of color had a high school diploma or the equivalent. Finally, over half (57.14%) of Caucasians and only 25.58% of persons of color had attained some college education. During the second time-period, all Caucasian participants had attained a minimum of a high school degree. Among persons of color, 18.60% had not achieved this level of education. Additionally, 21.42% of Caucasians and 30.23% of persons of color had received a high school diploma or an equivalent degree. Finally, 78.57% of Caucasians and 51.16% of persons of color had attained some college education during the follow-up period.

Additional multivariate multiple regression analyses were completed predicting psychological distress, total symptoms of substance abuse/dependence, risky sexual behaviors and deviancy for each time period. Again, analyses controlled for time since exit from foster care, and utilized the same set of predictors as above (victimization, age at foster care exit, years in foster care, number of foster care placements, gender and race). At the first time point, multivariate analyses revealed one significant main effect for victimization, Wilks $\lambda = .56$, $F(4, 45)=8.70$, $p < .001$, partial eta squared = .44. Power to detect the effect was .99. Box's M test was non-significant, $p = .07$.

Given the significance of the main effect, the univariate effects for victimization were examined. Significant univariate effects for victimization were obtained. The first was for time one substance abuse/dependence symptoms, $F(1, 53)=16.04$, $p < .001$, partial eta square = .25, power = .98. Higher victimization scores at time one were found to predict higher total substance abuse/dependence scores at time one, given their significant bivariate correlation, $r = .56$, $p < .001$. The second significant univariate effect for victimization was for scores of deviancy, F(1,

53)=26.69, $p < .001$, partial eta square = .36, power = .99. Higher victimization scores at time one predicted higher deviancy scores, r = .62, $p < .001$. Finally, a significant univariate effect for victimization on psychological distress was indicated, F(1, 53)=6.45, $p = .01$, partial eta square = .12, power = .70. Higher victimization since foster care (time one) predicted more current psychological distress, r = .31, $p = .02$.

Finally, multivariate analyses were run to predict second interview scores of risky sexual behavior, deviancy, psychological distress, and substance abuse/dependence symptoms using the same predictors as above, but utilizing time two victimization scores rather than those from time one. At the second interview, multivariate analyses revealed one significant main effect for victimization, Wilks $\lambda = .78$, F(4, 45)=3.20, $p = .02$, partial eta squared = .22. Power to detect the effect was .78. Box's M test was non-significant, $p = .10$.

Given the significance of the main effect, the univariate effects for victimization were examined. Significant univariate effects for victimization were obtained. The first was for time one substance abuse/dependence symptoms, F(1, 53)=6.48, $p = .01$, partial eta square = .12, power = .70. Higher victimization scores at time two were found to predict higher total substance abuse/dependence scores at time two, given their significant bivariate correlation, r = .31, $p = .02$. The second significant univariate effect for victimization was for scores of deviancy, F(1, 53)=7.24, $p = .01$, partial eta square = .13, power = .75. Higher victimization scores at time two predicted higher deviancy scores, r = .35, $p = .008$.

CHAPTER 4: DISCUSSION

These longitudinal data capture some of the experiences of former foster youths who age out, at the critical period of emerging adulthood, which takes place in the late teens and early twenties. For most young adults, this time it often tumultuous and characteristically unstable, as youths navigate their transition into adulthood by experimenting with various roles and options (Arnett, 2000; Eccles, et al., 2003). It is also a time when youths depend heavily on caregivers, often their parents, who provide monetary, structural, and emotional support (Shoeni & Ross, 2005).

As they are often without such supports, those who age out of foster care are without the same advantageous safety nets as their peers, essentially navigating a period fraught with difficult choices but without the ability to take risks or make mistakes without serious consequences. The present study builds on a growing literature which describes aging out youths as highly disadvantaged in a number of domains. Though some certainly thrive, the majority struggle and experience a number of adverse circumstances which make it all the more difficult for them to emerge as competent adults.

The present study examined the longitudinal outcomes of youths following their aging out exits from the foster care system and during their critical time of emerging adulthood. Initial interviews were conducted on average 3.51 years after the youth exited foster care, resulting in a sample of 265 youths who were representative of those who aged out in the metro Detroit area. The focus of the present study was a second follow-up conducted with these youths, which took place an average of 8.28 years post-foster care. The relatively small sample size (n = 57) at the second time point, despite thorough attempts at contacting all potential participants, suggests an instability which were additionally evident in the findings across multiple domains.

Youths in the present study were primarily persons of color (almost all African American), and a slight majority were women. These sample characteristics are not only consistent with the larger population of aged-out youths from which they were drawn (Fowler, 2009), but they allow for representation of women and people of color who are not often oversampled. As African-American children are disproportionately represented in the foster care system and are particularly at risk for removal from their family homes, this sample is particularly appropriate when studying the aged out population (U. S. Department of Health and Human Services, 2016).

The average youth reported entering the foster care system around age 12, remained in for just over six years, living at four to five placement homes/arrangements, and exited around legal adulthood, at the age of 17.86. Choosing to leave foster care before benefits are withdrawn is a common and alarming occurrence, as it is associated with an increased risk for psychosocial maladjustment (Courtney et al., 2007).

Homelessness is common among former foster youths, with studies estimating that upwards of 22% experience a period of homelessness during their first year following aging out (Kushel, Yen, Gee, & Courtney, 2007; Pecora et al., 2006) and one study indicating 53% of a sample of aged out youths experienced homelessness within 18 months (Kushel et al., 2007). The results of this study suggest that the majority of aged-out youths experience difficulties securing and maintaining stable housing, even many years post-foster care. Strikingly, nearly 60% of participants, across the combined follow-up period of about 8 years, experienced homelessness at least once. Among those experiencing homelessness, their homelessness accounted for nearly a year of the total 8-year follow-up period.

While literal homelessness was less common than being precariously housed, participants still spent an average of three weeks living on the streets, in shelters, or in a public space. More

than 20% of participants reported some period of literal homelessness, which is more than 10 times the national rate of 1.9% (5-year prevalence) among adults in the United States, as estimated in 2001 (Tompsett, Toro, Guzicki, Manrique, & Zatakia, 2006) and more than four times higher than the lifetime prevalence for literal homelessness lasting one month or more, which was recently estimated to be 4.2% (Tsai, 2017).

Another nearly 37% reported precarious housing arrangements, including living with friends or family when no other option was possible, due to financial realities. Since exiting foster care, fewer than half (42.10%) were continuously stably housed. Youths overwhelmingly blamed financial difficulties for their homelessness, but another 20% cited interpersonal difficulties. Over time, youths spent significantly less time homeless, suggesting that while they may struggle, many are able to achieve longer periods of stability as they age.

Youths in the follow-up sample reported an average of eight living arrangements across the 8-year follow-up period. While moving once per year may indicate an unusual lack of permanence, it may not be so unusual among youths of this age. According to a report by the U.S. Census Bureau, young adults, ages 18-to-34, are the most mobile age group, with more than twice the rate of migration compared to the general population (Benetsky, Burd, & Rapino, 2015). Youths tend to move for school, jobs, to safer areas to raise children, and to more affordable housing (Benetsky, Burd, & Rapino, 2015). The youths in the present sample primarily reported living in their own home or apartment, though many lived with relatives, friends, and even returned to live with biological parents. Almost no youths reported returning to live with former foster parents, suggesting a lack of connection and support, whether perceived or actual.

Though homelessness is surely a key concern, particularly in the shorter-term, education is additionally important in helping to meet the longer-term needs and goals of former foster youth.

Foster youths have been found to attain education more slowly than their peers, and to have an overall attainment that remains lower. For example, one large study found that 60% of aged out foster youths graduated from high school by age 19, while 87% of non-foster youths achieve this milestone (Courtney, 2009). In the present sample, nearly 60% had graduated high school by the first interview, and a total of 84% had done so by the second interview. This suggests that aged out youths return to their educational goals and earn their high school diplomas at rates nearly on par with national averages, though they do so more slowly than their peers.

Also, of note were significant multivariate findings suggesting that people of color obtained lower levels of education than their Caucasian peers at the time of the second interview. This relationship was not observed at time one, as the groups were relatively equivalent in the types of education obtained, suggesting that the Caucasian youths in the sample differed in educational goals, opportunities, and/or were able to leverage personal resources to seek education over time.

Youths in the current sample earned General Equivalence Degrees (GED) at high rates. GED recipients represent approximately 5.5% of the civilian, noninstitutionalized population of 18 to 24-year-old non-high school students (Chapman, Laird, & Kewal Ramani, 2010). In the present sample, a total of 35% of aged out youths earned a GED over the entire follow-up period. This is important to consider, as growing evidence suggests that high school graduates who do not attend college, and GED recipients, despite not differing in academic ability, differ in their economic outcomes, with the outcomes of GED recipients more closely resembling drop-outs who do not pursue a GED (Heckman & LaFontaine, 2006).

At the first interview, one-third of participants had additionally completed some college education. Among 18-to-24-year-olds this is much lower than the national rate of 67% who have attained at least some college credit (Rumbaut, 2004). However, second interview rates of college

credit (57.89%) approached this national statistic, suggesting that it may take aged out youths longer to begin working toward a college degree, but many still strive to achieve this goal.

Findings regarding education should be considered in light of evidence that the current sample differed from their non-responding peers by having more high school graduates at time one. It is possible that the 57 participants possessed advantages, such as mentors, higher intelligence or stronger goal orientation, which allowed them to achieve and to remain available for a follow-up interview.

The present sample additionally provided a timeline of their employment since exiting foster care. While the majority of youths reported at least some employment across the follow-up periods, they also overwhelmingly experienced periods of unemployment (approximately 90% of the sample at each interview). Youths spent, on average, approximately 45% of their time since foster care unemployed. When working, average salaries significantly increased from $772/month at the first interview to $1161/month at the second interview.

Yearly income was compared to U.S. poverty guidelines for the years in which interviews were conducted (US Department of Health and Human Services, 2017). Initial incomes did not exceed the poverty guideline for a single person, and fell far below the guideline for households with dependents, despite one quarter of the sample reporting at least one child at time one. The improved incomes at time two exceeded the poverty guideline for individuals but not for those with one dependent. At the second interview, half the participants had children. Aged-out youths also reported utilizing public assistance, with half doing so by the second interview. Many times this income supplemented periods of unemployment, but some received benefits in addition to their income from work.

Most commonly, youths were employed in service industry jobs, often working at fast food restaurants, driving taxis, serving tables, and working in customer service. These and similar jobs accounted for about half of all reported jobs. Additional employment settings included factory work, unskilled labor, and sales. Few youths were employed in managerial and white collar positions. Small numbers of youth reported illegal work, including prostitution and drug sales.

In addition to public assistance, some youths utilized social services. Women were more heavy utilizers than men, perhaps due to gendered roles of caring for children and lingering stigma regarding men seeking help. Most youths did not report service utilization, and those that did mostly used one or two services for roughly one week at a time. Very few individuals utilized services for long periods of time. The exception to this was medical services, which were utilized by most youth during the follow-up periods.

It is also notable that those who used services in the time between foster care and the first interview did not continue to access these resources during the second time period. A new group of service utilizers emerged during this time who had not reported previous access. This suggests a time-limited use of a small number of services rather than a continual use of many services over long periods of time.

The present sample provided details regarding their involvement with the legal system, including charges, convictions and time spent incarcerated. It has been estimated that, of those born in 1991, a few years after the births of those in the present sample, 5.2% will be incarcerated in their lifetimes, and this number increases to 6.6% for those born in 2001 (Bonczar, 2003). Of the youths in the current study, nearly 40% had been in jail over the total combined follow-up period, which is nearly 8 times the rate of lifetime incarceration in the general population.

For most participants, the length of time spent in jail was less than one month, with many spending just a single day. The types of crimes reported ranged widely, but were mostly non-violent crimes such as theft, driving under the influence, reckless driving and driving without a valid license. Some of the crimes committed, including theft and driving without a license, may have been related to the financial difficulties and general instability of the lives of many of these youths. Reinstating a license, in particular, often requires money, planning, navigating paperwork, and often transportation which may have been out of reach for some youths.

In addition to those times when behaviors led to legal intervention, many youths reportedly engaged in externalizing behaviors since exiting foster care. The number of youths (15-20%) in the current sample who indicated significant numbers of deviant behaviors were relatively consistent with the prevalence of teens currently in foster care with externalizing problems (McMillen, 2005). Scores of deviancy significantly decreased over time and were not found to be predicted by race or gender.

Behaviors which indicate pervasive irresponsibility were most commonly endorsed, followed by those involving theft and deceit. Less common were behaviors of aggression, though these were still endorsed by over one quarter of the sample at time one and 12% at time two. Few youths reported destructive behaviors, such as arson or destroying property. Finally, though serious violations of the law made up very few of the charges youths reported when detailing their legal pasts, 20% of youths at time one and 15% at time two reported these types of crimes, including rape, fraud, extortion, pimping and prostitution.

The present sample also provided information about their sexual behaviors, some risky and some normative. The majority of the current sample was sexually active and they endorsed an average of eight risky sexual behaviors at each interview. Rates did not decline over time. As they

aged, youths reported significantly fewer partners, with the majority (approximately 58%) reporting a single partner at the second interview.

Half of the sample reportedly engaging in sex while intoxicated and many reported exchanging sex for money (15-25%) or drugs (3-20%). Interestingly, these transactional sexual encounters were reported more frequently at the second interview, suggesting that some youths developed the savvy to leverage their sexuality to meet some of their needs. The risky behaviors reported in the present sample are consistent with other studies of former foster youths (Ahrens et al., 2010; Courtney et al., 2007).

Youths reported a number of consequences to their sexual behavior, particularly at the first time point. In fact, over 40% reported having been pregnant or having impregnated a partner at the first interview, with 16 reporting a history of abortion in the same timeframe. While not always the case, abortion typically implies an unwanted and unexpected pregnancy, perhaps as the result of higher-risk sexual behaviors such as failing to use birth control or a condom. Rates of pregnancy dropped dramatically to just over 5% at second interview, with none reporting abortions over that period.

Additional consequences of riskier sex included reports of a variety of sexually transmitted infections (STIs), sometimes also called STDs. The Centers for Disease Control and Prevention (CDC) estimates that the 20 million new STIs contracted annually account for nearly $16 billion in health care costs yearly (2017). Of course, the longer-term health consequences of untreated STIs are even more concerning. If left untreated, common STIs like chlamydia and gonorrhea, put men, women, and infants at risk for severe outcomes such as chronic pain, reproductive complications and HIV (CDC, 2017). Women are also at risk for pelvic inflammatory disease

which may cause chronic pain, infertility, and potentially result in a life-threatening ectopic pregnancy (CDC, 2017).

The majority of the current sample had been screened for STIs, and HIV in particular, during both follow-up periods. This suggests that youths are offered these services and may also proactively seek them out as a way of monitoring their health. HIV testing, in particular, is easily accessible for free in most major cities, and results suggest that aged-out youths are willing and able to utilize this resource. The infections reported were common, including chlamydia, gonorrhea, genital herpes and trichomoniasis. The majority of youths did not report an STI history, and rates of infection were commensurate with those found among young adults nationally (CDC, 2017). This is inconsistent with findings suggesting the former foster youth are 3 to 14 times more at risk for contracting an STI (Ahrens, et al., 2010). However, methodologies differed significantly between the prospective Ahrens, et al. (2010) and the current study, which relied on self-report. It is likely that self-report resulted in an underestimate of STI prevalence, which may explain differences between the rates found here and those found among other foster youths.

Birth control use is another important aspect of sexual health. The present study asked about birth control use in a broad sense (any type of birth control) and then more specifically inquired about condom use, as condoms prevent both pregnancy and many STIs. In the first few years following foster care exit, only 5% did not use birth control, and more than half used it at least 75% of the time. Use of birth control declined significantly at the second interview, but more than 40% continued to report perfect or near perfect use, while 28% reportedly never using birth control.

Similarly, condom use significantly decreased over time. At first interview, more than 45% reportedly used condoms at least 75% of the time and only 9% reported no condom use. Upon

second interview, aged out youths reported far less use of condoms. Though 31% remained consistent in their use, over 40% did not use condoms, representing an increase of 31%. At time two in particular, aged out youths reported condom use rates which are consistent with national averages (Copen, 2017). Using a nationally representative sample of men and women aged 15 to 44, Copen discovered that around 20% of those surveyed reported perfect condom use in the past four weeks (2017).

Though the follow-up periods of the current study were longer, possibly underestimating the four-week prevalence of condom use, youths in the present sample reported similar rates of 18% and 23% at times one and two, respectively. Declines in birth control over time is consistent with the youths report that many were in monogamous relationships by the time of the second interview, suggesting they may not have felt a need to use protection. In addition, as they aged, more reported maternity and paternity, which would necessitate the abstention from birth control, at least some of the time.

Youths additionally provided information regarding their use of alcohol and illicit substances. Most (73-77%) reported the use of alcohol during the total follow-up period. This is higher than national estimates for 18-24-year-olds, which find that 61.4-61.8% used alcohol during the time of this study (SAMHSA, 2017). Even though roughly half were not legally permitted to do so at time one, due to age restrictions, nearly three-quarters had used alcohol on at least one occasion. Rates of alcohol abuse/dependence symptoms were high, as 55-80% endorsed at least one symptom. At time one, almost half of the sample indicated clinically significant symptoms of alcohol abuse/dependence, and this declined slightly, though not significantly, to 37% by the time of the second interview. SAMSHA estimates that about 10.1% of adults aged 18 to 25 have been "heavy" alcohol users in the past month, and 6.0% use alcohol heavily at age 26 and older (2017).

Over half of the sample at the first interview, and over one quarter at the second, reportedly used marijuana. Nearly all who reported this use also endorsed at least one symptom of marijuana abuse/dependence. According to SAMHSA, 17-18% of youths ages 18 to 24, and roughly 6% of adults 25 and older, reportedly use marijuana (2017). Rates of marijuana use disorder are much lower at 5.6-5.9% of 18-to-24-year-olds and approximately 0.8% of adults 25 and older (SAMHSA, 2017). This suggests that aged out youths struggle with difficulties related to marijuana use at 4 to 8 times the rate of similar-age peers.

As is the case in the general population, the majority of aged-out youths did not endorse using illicit substances other than alcohol and marijuana (SAMHSA, 2017). However, the rates of endorsement far exceeded the prevalence of use seen among most young adults, as 15% reported some use at time one and 3% did so at time two. The most common class of drug reported (12.28% at time one), hallucinogens like ecstasy, is used by 1.9% of young adults ages 18 to 24 each year (SAMHSA, 2017). Even accounting for the lengthened follow-up periods, which may magnify the prevalence of use, the endorsement of illicit substances remains high among the aged out sample.

Finally, substance abuse/dependence symptoms were totaled to provide an overall picture of usage rates among aged out youths. Approximately 63% at time one and 80% at time two endorsed one or more difficulties related to their use of some substance. Even as they may not meet current criteria for a substance use disorder, the presence of substance-related problems suggests that many are at risk of developing a more serious disorder, and several are likely to experience additional negative consequences.

Results are consistent with the high rates of substance abuse/dependence found in other samples of former foster youth (Courtney et al., 2005, 2007; Jones, 2011; Pecora et al., 2005). While substance use disorders can lead to negative consequences on their own, they are also

closely linked with additional negative outcomes, such as mental illness, homelessness, and even suicide (U.S. Department of Health and Human Services, 2016).

Youths completed the Brief Symptom Inventory (BSI), producing scores of psychological distress across a number of domains, as well as a Global Severity Index (GSI; Derogatis, 1993). Scores were then compared to those of the normative sample and a low-income comparison group. At the first interview, aged-out youths indicated an overall level of distress that was nearly double that of the two comparison groups. This suggests that former foster youths experience distress beyond what might be attributable to the stressors of emerging adulthood or living in poverty.

Scores did not change significantly over time, and GSI scores at the second interview again exceeded those of each comparison group. Many individuals (nearly 32% at time one and 20% at time two) reported clinically significant levels of psychological distress when compared to adult non-patients. While significant GSI scores do not necessarily indicate the presence of a mental illness, these high scores are consistent with a number of other studies of former foster youths that have found elevated rates of mental illness and distress (Courtney et al., 2005, 2007; Pecora, 2005). In addition, time one scores were significantly higher than the one-year prevalence (18-22%) of mental illness found in the general population of 18-to-24-year-olds, though time two scores were consistent with those for adults aged 25 and up (SAMSHA, 2017).

The BSI also provides a clinical profile comprised of a number of clinical subscales. An interpretation of the mean profile for the current sample at time one suggests that many aged out youths experience difficulty trusting others, which leads them to feel lonely and isolated. They often additionally feel hostile or antagonistic toward others, while simultaneously experiencing feelings of embarrassment and sensitivity. These characteristics are likely to make social connection difficult for the youths, and they may struggle to maintain relationships with friends,

coworkers, family and romantic partners. Difficulty socially is likely to exacerbate the isolation already felt. In addition, youths reported high levels of sadness and anhedonia. The profile at the second interview was similar to the first, though decreased scores suggest somewhat improved mental health and decreased distress. However, the second profile remains elevated and distressed, suggesting psychological discomfort which persists over time.

Their lack of financial stability and higher rates of psychological distress may be impacting the group's rates of marriage. The low rate of marriage (7%) at the first time point is not necessarily indicative of struggle, as the median age at first marriage has risen to 27 for women and 29 for men (Wang & Parker, 2014). However, at the second interview, the rate of marriage remained low at 15.80%, despite many having reached the median age for first marriage. This can be compared to the 64% of African Americans and 84% of Caucasians 25-years and older who are or have been married (Ruggles, 2015; Wang & Parker, 2014). Additionally, the context for the study is important to consider when discussing marriage, as marriage was not widely legally accessible to LGBT participants at the time of this study (second interview 2009).

While marriage is certainly not necessary for the successful and happy life, it does confer a number of advantages, both social and economic, that these youths are unable or unwilling to access (Ruggles, 2015; Wang & Parker, 2014). It is also possible that generational differences are at play, as millennials are more likely to believe that focusing on goals beyond marriage and parenting are acceptable, and are more likely to choose alternatives to marriage, such as cohabitation (Wang & Parker, 2014). Still, the majority of millennials state that they would like to someday be married, and many cite their lack of financial stability as a key reason for their delay (Ruggles, 2015; Wang & Parker, 2014). As they experience more financial instability, lower

educational attainment, and high rates of unemployment, aged-out youths who wish to partake in the institution of marriage may find this extremely challenging.

Finally, youths reported on their experiences of a variety of victimizing experiences since their exit from foster care. The majority of foster youth are removed from their original homes due to abuse or neglect (U. S. Department of Health and Human Services, 2016). Many report histories of sexual and physical victimization from an early age, often well before their exits from foster care (Ahrens, Katon, McCarty, Richardson, & Courtney, 2012).

While these early experiences are important, it is additionally important to understand the ways aged out youths are victimized in adulthood. In the current sample, high levels of victimization were reported by 18% of youths at the first interview and 13% at the second interview. This is consistent with the high levels of victimization experienced by young adults nationally, as they account for 54% of all sexual assaults and 3% experience violent victimizations (Morgan & Kena, 2017; Morgan & Mason, 2014).

Total victimization, and violent-type victimization scores did not differ by gender or race. However, women reported more sexual victimization across both follow-up periods. This is consistent with national statistics which state that 90% of victims of sexual violence are women, while 10% are male (Snyder, 2000; Planty, Langton, Krebs, Berzofsky, & Smiley-McDonald, 2013). Additionally, the sexual assault of men is underreported and this is widely attributed to stigma surrounding the nature of this victimization (Planty et al., 2013). It is possible that the current sample of men underreported their experiences of sexual assault for similar reasons.

Those who are victimized, particularly sexually, are more likely to experience psychological distress, to abuse alcohol and drugs, and to attempt suicide (Kilpatrick, Edumuds, & Seymour, 1992; Langton & Truman, 2014). In fact, 70% of victims of sexual assault experience

moderate to severe distress, which is a much higher percentage than for any other violent crime (Langton & Truman, 2014).

Given the high rates of victimization among the current aged-out sample, it is not difficult to draw connections to their psychological and interpersonal difficulties. In fact, multivariate analyses at both time points indicate that victimization scores significantly predicted increased substance abuse, psychological distress (time one only) and deviant behaviors, which were primarily related to pervasive irresponsibility. Victimization acted as a consistently robust predictor, while factors related to experiences in foster care did not.

Findings related to victimization are important for intervention, as they are likely to be most effective if they are trauma-informed. Youths who experience more victimization are more likely to experience a number of negative outcomes. While this study did not assess causal pathways, it is feasible that victimization led to or exacerbated existing issues in the current sample. Early identification of victims may allow opportunities to intervene before substance use and/or psychological symptoms reach clinically significant levels.

Further, the prevention of victimization may help to alleviate some of the associated difficulties reported by aged-out youths. This may be accomplished through education of youths, law enforcement, foster families, and mentors. Regardless of approach, all interventions aimed at aging out youths should strive to be trauma-informed, as they are guaranteed to reach youths with significant trauma and risk factors for additional victimizing events.

In addition to specific interventions targeting victimization, it may also be beneficial to increase the length of supervision and benefits for at least some youths. Currently, 29 states do not extend foster care benefits beyond the age of 18, despite growing evidence that doing so is

associated with improved outcomes among foster youth (Child Welfare Information Gateway, 2017a, 2017b; Courtney & Dworsky, 2006; Fallesen, 2013).

Beginning in 2011 (well after the present sample left foster care), the state of Michigan began extending benefits to select youths ages 18-21, including those completing their education (secondary, postsecondary or vocational), those enrolled in a program designed to aid employment, those employed 80 or more hours per month, and those who are unable to take part in these activities due to a medical condition (Child Welfare Information Gateway, 2017a). Future research assessing a representative sample of youths who opt in and out of such a program could provide important insights into the specific benefits to Michigan foster youths, but research suggests they will attain higher levels of education, employment and income, and experience less homelessness at the very least (Courtney & Dworsky, 2006; Fallesen, 2013).

Revisiting Hypotheses

The current study set out to examine three main hypotheses using the longitudinal data of former foster youths described above. Significant changes in a number of key variables were first expected. While expected decreases in time spent homeless, and deviant behaviors were observed across the two follow-up periods, and increases in income from employment were additionally indicated, no differences in risky sexual behaviors, psychological distress, or victimization were found. It is possible that the follow-up period was not long enough to observe changes, or that these are persistent difficulties for former foster youths.

Additionally, many predictors of the outcomes of these youths were not found to be significant. Gender, which was hypothesized to predict lower education, instability of housing, higher income, lower distress, higher deviance, more risky sexual behaviors and higher rates of substance abuse/dependence, was not found to significantly predict any of these outcomes.

Additionally, time spent in foster care, age at foster care exit, more foster care placements were not found to be significant predictors. Two significant predictors were indicated which predicted outcomes as expected; being a person of color significantly predicted lower educational attainment at the second time period and higher victimization scores significantly predicted more deviancy and substance abuse at both time periods. Increased victimization further predicted more psychological distress at the first time point.

Limitations and Areas of Future Research

While this study contributed important information about the longitudinal outcomes of a vulnerable population, it is not without limitations. First, the small sample size (N = 57) led to an underpowered study, which rendered many statistical analyses less likely to identify findings. This is, unfortunately, not a unique difficulty in the longitudinal study of marginalized populations, but there are a number of factors which may have improved the response rate for the second interview. Continued contact with participants between the first and second time-points, though not possible for practical reasons for this study, would have likely improved the response rate, as invalid addresses, phone numbers, and collateral contacts often made individuals difficult or impossible to contact. Additionally, the employment of social media and electronic contacts (email) may have allowed for more simple identification and contact for many youths, as these accounts can be utilized regardless of living situation and often income, given the availability of free access to the internet via libraries.

Additionally, attrition effects were present, as three significant differences were identified between those participating in the second follow-up (n = 57) and those who were not located in order to participate (n = 208). First, it was necessary to dichotomize the race/ethnicity variable, rather than to consider persons of color in their unique groupings, due to very small numbers of

non-African American persons of color. While this somewhat limits the generalizability of these findings to former foster youths who are not Caucasian or African American, creating this dichotomized variable allowed for relative representativeness.

The present sample interviewed at the second follow-up contained more high school graduates than did the non-participant group (interviewed only at the first follow-up). Given the difficulties encountered in contacting participants, it is possible that high school graduation is a proxy for some minimal amount of stability necessary to maintain a consistent address or phone number. Finally, the sample contained higher rates of alcohol abuse/dependence symptoms than non-respondents with only the first interview. It is difficult to know why this may have been, though it is possible that higher educational attainment put youths in more contact with college environments and students, which may tend to normalize heavier drinking.

There are also a number of potential improvements that can inform future studies of former foster youths. First, some of the measures used for this study, while oft used with this population and well-validated, may benefit from updating as concepts and the DSM progress. For example, while the substance abuse portion of the interview thoroughly inquired about commonly used substances, such as alcohol and marijuana, and additionally asked about lower base-rate drugs, it failed to assess tobacco use. Though legal, tobacco use presents significant consequences, as it is the leading cause of preventable death in the U.S. (U.S. Department of Health and Human Services, 2014). As 1 in 5 people aged 12 or older were current cigarette smokers in 2016, this may present an interesting, if not necessary, avenue for future inquiry into ways to improve the health of foster youths (SAMHSA, 2017).

The study could have additionally assessed the outcomes of Lesbian Gay Bisexual and Transgender (LGBT) individuals to examine for differential outcomes. It is ideal, if not imperative,

to make attempts at inclusion, and to be careful to not erase one marginalized group as one attempts to study another. The Williams Institute, which is affiliated with the UCLA School of Law, estimated that 4.1% of Michigan's population identifies as LGBT (2016). Considering this subpopulation may be particularly important when studying millennials, who are estimated to have the highest rates of LGBT identification (7%) yet seen, making this an increasingly important area to include in research (Jones & Cox, 2015).

Additionally, evidence suggests differential outcomes for the LGBT community. Trans and gender non-conforming individuals face far higher rates of discrimination, victimization, poverty, homelessness, unemployment and suicidality than the general population (Grant, et al., 2011). They are much more likely to engage in illegal trades (sex work or drug sales), they report higher rates of alcohol and drug use, and they experience 85% more incarceration (Grant, et al., 2011). In fact, in one survey of over 6000 transgender individuals in the United States, 64% reportedly experienced sexual assault and 41% had attempted suicide, compared to 1.6% of the general population (Grant, et al., 2011). Similarly, the LGBT residents of Michigan are more likely to be unemployed and lack health insurance, and less likely to have a college education (The Williams Institute, 2016). Given their prevalence among millennials, studying the LGBT aged-out population could offer unique insights into the ways that policies and social services could improve their outcomes and address their unique needs.

For an example of how considering LGBT issues may have impacted the present study; the measure of risky sexual behavior offers an important example. In the present study, the risky sexual behavior measure did not thoroughly address sexual orientation and partner preference or the impact they may have on levels of risk. Risk stemming from anal sex, for example, will differ greatly for those women who are primarily having sex with other women compared to those

engaging in anal sex with a male partner. Additionally, a lack of birth control among women who engaged sexually with other women is not a concern, but a lack of protection (via a dental dam, gloves or a female condom) from STIs may be.

Additional measures used in the current study may benefit from updating. Questions pertaining to marriage and partnership may benefit from the addition of inquiry into cohabitation, intent/desire to marry, and reasons for delaying or engaging in marriage, given the millennial population in question. In addition, measures used to assess deviant behaviors and substance abuse/dependence symptoms were drawn from the DIS-3A and DSM-III-R criteria and do not necessarily correspond easily to current standards for disordered behavior as described in the DSM-V. Updating this may make issues of clinical significance more apparent. The choice to update or include additional measures is a difficult one, particularly in longitudinal studies where adherence to the protocol is key and lengthening an interview may not be feasible, but in designing a new study these updates may help to improve the impact of important findings.

Another interesting update to this research would be an additional focus on resilience factors which allow for some youths to thrive. Some of the identified resilience factors among former foster youths include planning for the future, higher intelligence, goal-orientation, and optimism (Eccles, et al., 2003; Haas & Graydon, 2009; Masten et al., 2004; Roisman, Aguilar, & Egeland, 2004). While these tend to be thought of as relatively stable traits, understanding the extent to which they may moderate important outcomes may help to identify groups of aged out youth who are in greater need for intervention in order to avoid long-term negative consequences.

Additionally, access to stable adults in the natural environment, or ‘natural mentors’, such as teachers, coaches, neighbors, bosses, and religious leaders, has been linked to improved outcomes (Ahrens, DuBois, Richardson, Fan, & Lozano, 2008; Greeson & Thompson, 2014;

Munson & McMillen, 2009). These benefits include improved perceived health, less suicidal ideation, fewer STIs, fewer arrests, and less physical aggression, stress and depression (Ahrens, et al., 2008; Munson & McMillen, 2009). One study also linked natural mentoring to decreased odds of homelessness and increased odds of having worked in the past year (Courtney & Lyons, 2009). Some evidence suggests that mentors improve youths' perceptions of their futures (DuBois & Silverthorn, 2005; Hellenga, Aber, & Rhodes, 2003), which have been linked to positive outcomes among at-risk and normative adolescent samples (Aronowitz & Morrison-Beedy, 2004; Robbins & Bryan, 2004).

Natural mentoring relationships tend to grow in a gradual manner and to be more stable than some other relationships, because the mentor exists in the mentees social network (Greeson & Thompson, 2014). There is also some evidence to suggest that former foster youth recognize their need for mentors, particularly as it pertains to education. In interviews conducted with 43 current and former foster youths, many identified their need for "permanent relationships with caring adults" as well as needs for connections with adults in the school system and stated that they felt these would have improved their outcomes following exit from foster care (Day, Riebschleger, Dworsky, Dameshek, and Fogarty, 2012). While mentoring relationships exist naturally for many youths, it may also be possible to intervene by encouraging and creating opportunities for such relationships to develop, offering an interesting possibility to design an intervention which may have myriad benefits over many years.

Policy and Intervention Implications

Overall, this study, along with many others on aged out youths, suggests that exiting foster care without the safety net of a permanent family often results in a number of negative outcomes over many years, and possibly the lifetime. However, there is also evidence that aged out youth

are resilient in a number of ways. Despite slow starts, many return to their educations, attain improved employment, engage in fewer externalizing behaviors, and secure stable housing over time. Given mentorship, trauma-informed care, and additional resources, it is possible that aged out youths will begin to close the gaps between themselves and their same-age peers.

A number of possible avenues exist for improving the outcomes of foster youth. First, some, like Casey Family Programs, focus on strengthening families who become involved in the foster care system, making post-permanency a key focus (Humenay Roberts, O'Brien, & Pecora, 2017). According to this foundation, decreasing the instability inherent in reentering the foster care system multiple times will improve outcomes. They offer a number of suggestions for policy makers and researchers which may aid in the development of prevention programs (Humenay Roberts, O'Brien, & Pecora, 2017). First, they recommend that anyone involved with foster youth develop an understanding of trauma and utilize a trauma-informed lens. This is consistent with the high levels of trauma present among foster youths while in foster care, and also trauma experiences following foster care exit, as found in the present sample.

Another important consideration will be the inclusion of all stakeholders when developing programs, conducting research, or crafting policies (Humenay Roberts, O'Brien, & Pecora, 2017). It is often necessary to collaborate and network in order to gain the clearest understanding of an issue and this collaboration is also a practical concern when outcomes rely on the cooperation of multiple stakeholders. In the current study, for example, DHS involvement was critical to procuring the records of foster youths. Additionally, the family and friends of these youths were often involved in helping researchers to access participants, often serving as points of contact.

Finally, the perspectives of the youths themselves were integral to better understanding their experiences. They provided information regarding their number of placements and exits from

foster care, as well as provided their perspectives on the homelessness, educational barriers, and other difficulties they faced. Stakeholders, and particularly foster youths themselves, can provide insights into the successes and failures of the systems that serve foster youth. They are also likely to be integral to creating successful interventions and policies that will have the largest impact.

Certainly at present, a key policy concern is the extension of foster care benefits beyond the age of 18. A growing understanding of emerging adulthood, along with the quality research being done to assess the outcomes of aging out youths has convinced some states to extend benefits under specific conditions. However, these extensions do not alleviate the burdens of all youths, and may not prolong services enough to prevent most youths from floundering upon exit. Continued services beyond foster care will be needed to address the full range of problems seen among aged out youths. These will include support for their continued education, employment services, stable housing, mental health services that are trauma-informed, and social supports to begin mitigating the mistrust and isolation prevalent in this population.

Given their developmental period at the time of aging out, it will be important to provide services that allow for the natural experimentation and sometimes failures of early adulthood. Further, a focus on the strengths of foster youth, rather than only their struggles, is likely to aid in engendering hope and fostering a drive to succeed.

APPENDIX A: TABLES

Table 1

Summary of Samples at Times One and Two

	Time 1 Sample (n = 265)		Time 2 Sample (n = 57)	
	n (%)	*M(SD)*	*n* (%)	*M(SD)*
Age		20.49(1.03)		25.79(1.21)
Gender				
Male	127(47.90)		24(42.10)	
Female	138(52.10)		33(57.90)	
Race				
Caucasian	57(21.50)		14(24.60)	
African American	206(77.70)		41(71.90)	
Hispanic	1(0.40)		1(1.80)	
Other	1(0.40)		1(1.80)	
Age at Entry		13.31(3.81)		13.56(3.59)
No. of Placements		5.77(4.31)		5.46(4.03)

Table 2

Comparison of Current Sample Respondents and Nonrespondents at Time One

		Respondents (n = 57)		Nonrespondents (n = 208)		
		n (%)	$M(SD)$	n (%)	$M(SD)$	p
Age			*20.74(1.04)*		*20.48(1.26)*	.15
Gender						.32
	Male	24(42.1)		103(49.5)		
	Female	33(57.9)		105(50.5)		
Race						.527
	Caucasian	14(24.6)		43(20.7)		
	Persons of Color	43(75.4)		165(79.3)		
DHS Age at Entry			*13.56(3.59)*		*13.23(3.87)*	.57
DHS # Placements			*5.46(4.03)*		*5.85(4.43)*	.54
Life Since FC						
	Ever Married	4(7.0)		15(7.2)		.96
	Children	14(24.6)		82(39.4)		.10
	Ever homeless	27(47.4)		101(48.6)		.87
	Attended School	42(73.7)		151(72.6)		.87
	HS Grad	33(57.9)		76(36.5)		.004*
	GED	10(17.5)		31(14.9)		.63
	Had Any Income	55(96.5)		198(95.2)		.68
	Monthly Income		*772.31(484.98)*		*661.96(739.74)*	.86
	Conviction/Charges	13(22.8)		57(27.4)		49
	Days in Jail		*11.44(44.72)*		*80.90(57.90)*	.57
Outcomes	Gen. Severity Index		0.55(0.61)		0.55(0.64)	.99
	Somatization		0.31(0.52)		0.35(0.58)	.68
	Obs. Compulsive		0.63(0.75)		0.71(0.87)	.58
	Interpersonal Sens.		0.52(0.63)		0.61(0.86)	.65
	Depression		0.56(0.67)		0.52(0.79)	.64
	Anxiety		0.44(0.64)		0.43(0.66)	.84
	Hostility		0.68(0.75)		0.63(0.80)	.51
	Phobic Anxiety		0.27(0.41)		0.33(0.59)	.67
	Paranoid Ideation		0.95(0.94)		0.95(0.99)	.99
	Psychoticism		0.33(0.47)		0.58(0.78)	.86
	Victimization		1.34(0.41)		1.35(0.44)	.84
	Risky Sexual Behavior		24.19(18.13)		26.38(27.35)	.57
	Illegal Beh. Sx Count		2.91(3.16)		2.75(2.62)	.61
	Substance Abuse Sxs		4.18(4.59)		3.23(4.62)	.17
	Marijuana		1.61(2.21)		1.52(2.16)	.77
	Alcohol		2.28(2.54)		1.46(2.71)	.04*
	Other Drugs		0.28(0.80)		0.25(0.83)	.83

Table 3

Sample Characteristics at First and Second Time-Points

N= 57	Time 1				Time 2			
	M(SD)	Med.	Range	*n*(%)	*M(SD)*	Med.	Range	*n*(%)
Age	20.74(1.04)	21.00	3		25.81(1.20)	26.00	4	
Gender								
Male				24(42.10%)				
Female				33(57.90%)				
Race/ Ethnicity								
Persons of Color				43(75.40%)				
Caucasian				14(24.60%)				
Identified Disability				8(14.00%)				
Been Married				4(7.00%)				9(15.80%)
Remain Married				3(5.26%)				8(14.04%)
Have Children				14(24.60%)				30(52.60%)
Foster Care								
Entry Age	11.58(4.20)	13	17					
# Placements	4.42(3.98)	3	16					
Years in FC	6.28(4.23)	5	17					

*significance at $\alpha = .05$

Table 4

Housing Outcomes at Times One and Two

n = 57	Time One		Time Two		Both Times		
	n(%)	*M(SD)*	*n*(%)	*M(SD)*	*n*(%)	*M(SD)*	*p*
Ever Homeless	27 (47.37)		17 (29.82)		33 (57.89)		
Total Days Homeless		202.11 (273.34)		152.77 (424.25)		354.88 (505.50)	.46
Percent Time Homeless		16.87 (24.74)		6.69 (16.09)		10.80 (14.52)	.01*
Total Days Literally Homeless		9.33 (38.11)		10.30 (49.11)		19.63 (60.57)	.91
Percent Time Literally Homeless		0.66 (2.44)		0.53 (2.48)		0.59 (1.78)	.79
Total Days Precariously Housed		189.51 (270.15)		142.47 (419.47)		331.98 (504.76)	.47
Percent Time Precariously Housed		15.98 (24.49)		7.91 (21.94)		11.04 (16.37)	.07
Homelessness Vector							
Literally Homeless	9 (15.79)		5 (8.77%)		12 (21.05)		
Precariously Housed	18 (31.58)		12 (21.05)		21 (36.84)		
Continuously Housed	30 (52.63)		40 (70.18)		24 (42.10)		

*indicates significance at α = .05

Table 5

Living Arrangements at Times One and Two

n = 57	Time 1 *#(% of housing events)*	Time 2 *#(% of housing events)*	Both Time Periods *#(% of housing events)*
Living Arrangements			
Own Home/Apartment	61 (25.21%)	119 (54.34%)	180 (39.05%)
Other Relative(s)	55 (22.73%)	23 (10.50%)	78 (16.92%)
Biological Parent(s)	25 (10.33%)	31 (14.16%)	56 (12.15%)
Friend(s)	33 (12.64%)	18 (8.22%)	51 (11.06%)
Partner	16 (6.61%)	9 (4.11%)	25 (5.42%)
University Housing	15 (6.20%)	2 (0.91%)	17 (3.69%)
Supervised/Group Home	6 (2.48%)	4 (1.83%)	10 (2.17%)
Street	2 (0.83%)	5 (2.28%)	7 (1.52%)
Shelter	4 (1.65%)	2 (0.91%)	6 (1.30%)
Correctional Institution	5 (2.07%)	1 (0.46%)	6 (1.30%)
Military Base or Service	3 (1.24%)	2 (0.91%)	5 (1.08%)
Car	3 (1.24%)	2 (0.91%)	5 (1.08%)
Hotel	5 (2.07%)	0 (0.00%)	5 (1.08%)
Hospital or Rehab	3 (1.24%)	1 (0.46%)	4 (0.87%)
Foster Family	3 (1.24%)	0 (0.00%)	3 (0.65%)
Boss or Pimp	1 (0.41%)	0 (0.00%)	1 (0.22%)
Abandoned Building	1 (0.41%)	0 (0.00%)	1 (0.22%)
Independent Living	1 (0.41%)	0 (0.00%)	1 (0.22%)
Bus Station	0 (0.00%)	0 (0.00%)	0 (0.00%)
Public Park	0 (0.00%)	0 (0.00%)	0 (0.00%)
Total # Housing Events	242	219	461

Table 6

Educational Outcomes at Times One and Two

n = 57	Time One *n*(%)	Time Two *n*(%)	Both Time Periods *n*(%)
Graduated High School	33 (57.89%)	15 (26.32%)	48 (84.21%)
Earned GED	10 (17.54%)	10 (17.54%)	20 (35.09%)
Received Financial Aid	17 (29.82%)	9 (15.79%)	26 (45.61%)
Received Special Education	9 (15.79%)	0 (0.00%)	9 (15.79%)
Received Vocational Training	13 (22.81%)	1 (1.75%)	14 (24.56%)
Education Vector			
No High School Degree	14 (24.56%)		8 (14.04%)
HS Degree or Equivalent	24 (42.11%)		16 (28.07%)
Some College	19 (33.33%)		33 (57.89%)

Table 7

Educational Types at Times One and Two

n = 57	Time One *# times utilized*	Time 2 *# times utilized*	Both Time Periods *# times utilized*
Public/Private School	84	2	86
Institutional	2	0	2
Tech./Voc.Training	79	15	94
College or University	37	13	50
Community College	41	24	65
Adult Education/GED	65	3	68
Alternative Education	14	0	14

Table 8

Monthly Income at Times One and Two with T-Test Comparison

	Time One		Time Two		
	M(SD)	*n(%)*	*M(SD)*	*n(%)*	*p*
Income: Employment		50(87.72%)		48(84.21%)	
Daily	\$25.74(16.17)		\$38.69(30.36)		
Monthly	\$772.31(484.98)		\$1160.85(910.66)		.001*
Yearly	\$9395.10(5902.05)		\$14121.85(11081.40)		
Income: Public Assistance		22(38.40%)		29(50.88%)	
Daily	\$8.99(5.04)		\$38.55(124.39)		
Monthly	\$269.63(151.09)		\$1156.39(3731.75)		.18
Yearly	\$3281.35(1839.60)		\$14070.75(45402.35)		
Income: Illegal Activities		3(5.26%)		1(1.75%)	
Daily	\$38.13(27.84)		\$33.33(n/a)		
Monthly	\$1143.83(835.12)		\$1000.00(n/a)		
Yearly	\$13917.45(10161.60)		\$12165.45(n/a)		
US Poverty Guidelines	Yearly Income (2005)		Yearly Income (2009)		
Single Person	\$9570		\$10830		
Two People	\$12830		\$14570		
Three People	\$16090		\$18310		
Four People	\$19350		\$22050		

*indicates significance at $\alpha = .05$

Table 9

Sources of Income and Employment at Times One and Two

Employment Settings	Time One (n = 57) #(% of jobs held)	Time Two (n = 55) #(% of jobs held)	Both Time Periods #(% of jobs held)
Service/Hospitality	87 (57.62%)	75 (47.47%)	162 (52.43%)
Labor/Manufacturing	26 (17.22%)	30 (18.99%)	56 (18.12%)
Skilled Trades (non-service)	4 (2.65%)	9 (5.70%)	13 (4.21%)
Sales	21 (13.91%)	11 (6.96%)	32 (10.36%)
Managerial/Administrative	0 (0%)	6 (3.80%)	6 (1.94%)
Healthcare	7 (4.64%)	16 (10.13%)	23 (7.44%)
Skilled White Collar	2 (1.32%)	5 (3.16%)	7 (2.27%)
Illegal Trades	4 (2.65%)	2 (1.27%)	6 (1.94%)
Total # Jobs Reported	151	158	309

Table 10

Legal Difficulties at Times One and Two

n = 57	Time 1 *n*(%)	Time 2 *n*(%)	Lifetime *n*(%)
Spent Time in Jail	11(19.30%)	12(21.10%)	22(38.60%)
Male	8(33.33%)	6(25.00%)	13(54.16%)
Female	3(9.00%)	6(18.18%)	9(27.27%)
Persons of Color	5(11.63%)	10(23.26%)	14(32.56%)
Caucasian	6(42.86%)	2(14.29%)	8(57.14%)
Charged/Convicted of Offense	13(22.80%)	12(21.10%)	23(40.40%)
Male	7(29.17%)	6(25.00%)	11(45.83%)
Female	6(18.18%)	6(18.18%)	12(36.36%)
Persons of Color	7(16.28%)	8(18.60%)	14(32.56%)
Caucasian	6(42.86%)	4(28.57%)	9(64.29%)

Table 11

Illegal Behavior Symptom Count at Times One and Two with T-Test Comparison

n = 57	*Time One*		Time Two		*p*
	M(SD)	*n(%)*	*M(SD)*	*n(%)*	
Total Scores	2.91(3.16)		1.50(1.26)		.002*
Clinically Significant		9(15.79%)		11(19.30%)	
Men	2.50(2.38)		1.71(1.33)		
Women	3.21(3.64)		1.36(1.19)		
Caucasians	2.29(1.44)		1.21(1.31)		
People of Color	3.12(3.54)		1.60(1.24)		
Endorsed Behaviors					
Irresponsibility		30(52.63%)		23(40.35%)	
Theft or Deceit		27(47.37%)		17(29.82%)	
Destruction		9(15.79%)		3(5.26%)	
Aggression		15(26.32%)		7(12.28%)	
Severe Law Violations		11(19.30%)		9(15.79%)	

*indicates significance at $\alpha = .05$

Table 12

Days of Service Use at Times One and Two

n = 57	Time One			Time Two			*Total* *n*(%)
	M(SD)	*Utilizers* *n*(%)	*Among Utilizers: M(SD), Med. (Range)*	*M(SD)*	*Utilizers* *n*(%)	*Among Utilizers: M(SD), Med. (Range)*	
Shelter/ Tran.Housing/ Group Home	38.14 (159.37)	8 (14.00%)	271.75 (361.45), 96 (997)	1.32 (8.77)	3 (5.30%)	25.00 (35.59), 7 (64)	11 (19.30%)
Outreach/ Drop-in Centers	0.56 (3.97)	3 (5.30%)	10.67 (16.74), 1 (29)	0.12 (0.13)	1 (1.80%)	1 (n/a), 1 (0)	4 (8.80%)
Soup Kitchens	1.23 (6.48)	7 (12.30%)	10.00 (17.01), 3 (47)	1.74 (5.78)	7 (12.30%)	14.14 (10.37), 17 (28)	14 (24.60%)
Medical	14.09 (21.85)	50 (87.70%)	16.06 (22.66), 6 (117)	11.07 (31.42)	40 (70.20%)	15.78 (36.63), 4 (207)	52 (91.23%)
Psychological/ Sub. Abuse	11.79 (34.02)	14 (24.6%)	48.00 (55.79), 28 (199)	9.68 (48.80)	11 (19.30%)	50.18 (105.36), 16 (361)	23 (40.35)
Self-Help (Crisis Line, AA/NA, Mentors)	1.46 (7.43)	4 (8.80%)	16.60 (21.42), 2 (47)	2.35 (10.00)	6 (10.50%)	22.33 (24.19), 16 (68)	10 (17.54%)
Transportation	13.95 (48.98)	11 (19.30%)	72.27 (93.80), 30 (299)	25.93 (79.06)	12 (21.10%)	123.17 (136.95), 55 (359)	21 (36.84%)
Child Care or Services (WIC, Medical, etc.)	40.86 (153.75)	14 (24.60%)	166.36 (281.68), 58.50 (998)	107.32 (271.25)	24 (42.10%)	254.88 (374.02), 225 (1824)	31 (54.39%)
Family Independence Agency	5.16 (20.39)	25 (43.90%)	11.76 (29.82), 3 (149)	20.53 (81.96)	24 (42.10%)	48.75 (122.15), 2 (364)	40 (70.20%)
Subsidized Housing	39.68 (186.40)	4 (7.00%)	565.50 (502.09), 589.50 (915)	44.84 (120.86)	8 (14.00%)	319.50 (128.69), 365 (364)	11 (19.30%)
Total Days of Service Use	160.56 (330.61)	53 (93.00%)	172.68 (339.97), 30 (1319)	177.35 (236.81)	48 (84.20%)	210.60 (244.27), 78.50 (759)	56 (98.25%)
Total Percent of Days Used Services	0.14 (0.31)			0.10 (0.13)			

Table 13

Psychological distress with comparison data and significance of t-tests

n = 57	Time One Raw *M(SD)*	Time Two Raw *M(SD)*	*p*	Adult Norm Comparison *M*	Low-Income Comparison *M*
GSI	.55(.61)	.41(.45)	.21	.30	.28
Depression	.56(.67)	.41(.52)	.23	.28	.27
Anxiety	.44(.64)	.35(.40)	.37	.35	.23
Somatization	.31(.52)	.26(.42)	.64	.29	.17
Interpersonal Sensitivity	.52(.63)	.46(.79)	.69	.32	.29
Hostility	.68(.75)	.48(.47)	.09	.35	.40
Obsessive Compulsive	.63(.75)	.61(.71)	.90	.43	.42
Phobic Anxiety	.27(.41)	.20(.32)	.33	.17	.11
Paranoid Ideation	.95(.94)	.65(.70)	.04*	.34	.43
Psychoticism	.33(.47)	.54(.67)	.07	.15	.22

*indicates significance at $\alpha = .05$

Table 14

Victimization Scale at Times One and Two with T-Test Comparison

n = 57	Time One	Time Two	
	M(SD)	*M(SD)*	*p*
Total Scores	1.34(.41)	1.28(.37)	.36
Violent	5.18(1.75)	4.95(1.69)	
Sexual	3.61(1.59)	3.51(1.59)	

Table 15

Sexual Behaviors at Times One and Two with T-Test Comparisons

n = 57	*Time One*		*Time Two*		
	M(SD)	n(%)	*M(SD)*	n(%)	*p*
Total RSB	8.05(3.83)		7.61(3.44)		.43
Engaged in Sex		50(87.72%)		48(84.21)	
Sex Frequency	2.54(.86)		2.26(.90)		.07
Number of Partners	9.25(15.56)		1.55(1.25)		.001*
Engaged in Oral Sex		36(63.16%)		43(75.44%)	
Engaged in Anal Sex		12(21.05%)		15(26.32%)	
Exchanged Money for Sex		8(14.04%)		14(24.56%)	
Exchanged Drugs for Sex		2(3.51%)		11(19.30%)	
Engaged in Sex While Intoxicated		28(49.12%)		26(45.61%)	
Engaged in Sex with IV Drug User		3(5.26%)		12(21.05)	
Engaged in Sex with HIV+ Partner		0(0%)		11(19.30%)	
Been Pregnant- Self or Partner		24(42.11%)		3(5.26%)	
Had an Abortion- Self or Partner		9(15.79%)		0(0%)	
Birth Control Use	3.38(1.56)		2.74(2.18)		.04*
Never		3(5.26%)		16(28.07%)	
Rarely (1-24%)		5(8.77%)		3(5.26%)	
Sometimes (23-49%)		7(12.28%)		2(3.51%)	
Often (50-74%)		4(7.02%)		4(7.02%)	
Usually (75-90%)		17(29.82%)		7(12.28%)	
Always (100%)		14(24.56%)		18(31.58%)	
Condom Use	2.96(1.70)		2.04(2.19)		.01*
Never		5(8.77%)		23(40.35%)	
Rarely (1-24%)		9(15.79%)		4(7.02%)	
Sometimes (23-49%)		5(8.77%)		2(3.51%)	
Often (50-74%)		5(8.77%)		3(5.26%)	
Usually (75-90%)		16(28.07%)		5(8.77%)	
Always (100%)		10(17.54%)		13(22.81%)	
Tested for HIV		35(61.40%)		42(73.68%)	
Positive HIV Test		0(0%)		0(0%)	
Had an STI	.22(.42)	11(19.30%)	.13(.35)	7(12.28%)	.00*
Genital Herpes		0(0%)		1(1.75%)	
Gonorrhea		4(7.02%)		2(3.51%)	
Syphilis		0(0%)		0(0%)	
Chlamydia		5(8.77%)		5(8.77%)	
Trichomoniasis		1(1.75%)		1(1.75%)	

*indicates significance at $\alpha = .05$

Table 16

Substance Use at Times One and Two with Comparisons

n = 57	Time One *M(SD)*	Time Two *M(SD)*	*p*
Alcohol Use			
Total Symptoms of Abuse/Depend.	2.28(2.54)	2.86(2.87)	.290
4+ Symptoms of Abuse/Depend.	0.47(0.50)	0.37(0.47)	.380
Marijuana			
Total Symptoms of Abuse/Depend.	1.61(2.21)	1.16(2.24)	.319
3+ Symptoms of Abuse/Depend.	0.25(0.43)	0.20(0.40)	.536
Other Drugs			
Dichotomous Endorsement	Med = 0.00	Med = 0.00	
Total Symptoms of Abuse/Dependence	4.18(4.59)	3.77(3.80)	.635

APPENDIX B: MEASURES

Section 1
FOSTER CARE HISTORY

---

1. How old were you when you first entered foster care?

   Two digit code

3. How many different foster placements did you have?

   Three digit code

Section 1
HOUSING, EDUCATION AND INCOME TIMELINE (HEIT)

In case of computer malfunction, use HEIT worksheets to answer these questions

---

Part 1, Version A – LIVING ARRANGEMENTS *(Answer Sheets A1-A8)*

I'm interested in finding out all the different places where you have stayed since your last interview on ___________ *(insert 1st interview date)*. **Please think about the different places you've stayed for a period of 2 weeks or more. These places might include your own house or apartment, the house or apartment of parents, other family members, or friends, group homes, detention centers, and inpatient or outpatient hospitals.** *NOTE: Structured living facilities such as detention centers or hospitals should be considered "homeless" places in cases where no dwelling is available upon discharge*. **We also want to know about any situation where you have been homeless, even if it was only for one night. These places might include living on the street, in a shelter, in motels or hotels, or some other temporary place because you could not afford to live elsewhere.**

On the date of your first interview *(remind respondent of the month/day/year)*, **you were living** _________ *(insert living arrangement on that date)*. **What different places did you live since then?**

1-2. The ID number of each living arrangement site.
If any site gets listed more than once, during the current interview give it the same number each time.

3-8. Let's begin with your living arrangement at the time of your first interview.
MM/DD/YY of the day following the respondent's first interview.

9-14. When did you leave that place?
MM/DD/YY that respondent left the site.

Now I'd like to learn more about the places you have lived since you were last interviewed.

15-16. What type of place was (*site name*)**?**
Don't read this list to the respondent!

01. living with parent(s)
02. [do not use]
03. military base or service
04. shelter
05. boyfriend's/girlfriend's place
06. own house/apartment
07. other friend's place
08. other relative's place (other than parent- not licensed provider)
09. pimp or boss's place
10. supervised setting (group home)
11. correctional institution (jail, prison, detention center, etc.)
12. hospital/rehab unit
13. car
14. bus station
15. abandoned building
16. public park
17. on the street (doorway, gutter, heating grate, sidewalk)
18. [do not use]
19. University housing (dormitory)

17-18. While you were at *(site name)*, **were you homeless? By homeless we mean you were 1) living on the streets or in a shelter, or (2) that you were staying someplace on a temporary basis because you could not afford to live elsewhere** *[Note to interviewer: normally this would* ***not*** *include parents or others who served as primary caretakers when respondent was a minor]*.

If yes, ask: **What was the main reason why you were homeless at this time?**
If no, skip to #19.

00. Trouble with family
01. Job loss/Lack of work
02. Eviction
03. Mental illness/personal crisis
04. Termination of public assistance
05. Drug/alcohol abuse
05. Trouble with the law or being arrested
06. Physical disability
07. Lack of affordable housing
08. Disruption of personal relationship/divorce
09. Domestic violence
10. Got pregnant
11. Destruction of home due to fire or other catastrophe

Part 2 - FAMILY*(Use Answer Sheet A9)*

Have you ever been married? *If NO, skip to the next set of questions about children.*
0= no 1= yes

Are you still together? *If NO, go to the next question. If YES, you should only have one date entered; this shows that the respondent got married on a certain date and this marriage has not ended. Go to the questions about children.*

Do you have any children? *If NO, skip to the next set of questions about education.*

29-44. What were the months and years that your children were born? *In the case of twins or triplets, enter the birth date two or three times.*

45-48. Do your children live with you? *If yes, code zero for each child.*

*If no, ask:***Who do they live with?**

0. Respondent
1. child's other parent
2. grandparent(s)
3. other relative
4. respondent's friend
5. foster care
6. respondent's parent(s)

item #45---place where first child lives

item #46---place where second child lives
item #47---place where third child lives
item #48---place where fourth child lives

Part 3 - EDUCATION *(Use Answer Sheets A9 and A10)*

Now I'm going to ask you about your education and/or received job training since your last interview. I am interested in knowing the places you went to school or received job training and when you attended. Let's start with your education.

Write the school's name and dates attended above each block of 20.
Be sure to ask for the complete name and location of college.

What schools have you attended since your last interview *(you may need to remind the respondent of the 1st interview date)***?**

61-62. Record the number of the school site.
If any school already listed in a previous interview comes up again, give it the same ID number each time.

When did you attend (School Name)**?**

Only code Month and Year

71. What type of school was this?

0. Regular (public or private schools)
1. Institutional (school in a shelter, juvenile setting)
2. Technical/Vocational Program or Training
3. College, University
4. Community College
5. Adult Education/GED classes
6. Alternative education/school

If #71 is coded 3, do not ask 72 thru 75

76-79. **Have you ever graduated from high school? 0= no, 1= yes**
If no, skip to XX.

76-80. **What was the month and year of your graduation? (code MM/YY)**

Did you receive your GED? 0=no, 1= yes

Since your last interview, have you received Vocational/job Training or Education?

No 0 *Yes 1*

If yes, **All together, how many days have you used** *(name of service)* **since** *[since last interview date]*?

Did you receive financial assistance or scholarships to pay for these services? 0=no, 1= yes

Have you ever received special education?

No 0 *Yes 1*

Part 4 - WORK AND PUBLIC ASSISTANCE *(Answer Sheet A11)*

Begin coding on Answer Sheet A11, Side 1, Question #1.

Have you made any money on your own or been supported by your own public assistance since your last interview?*If no, skip to Financial & Personal Responsibility questions.*

I am going to ask you about the various ways in which you have supported yourself since your last interview, including public assistance, food stamps, WIC (cash amount), etc. We will start from the day after your last interview and go through to the present.

Write the job title and dates above each block of 20.

Only code Month and Year

9-11. What were you doing to make that money?

Three Digit Job Code.

12-16. What was your average monthly *[net]* **income while you were doing that?**

--OR--

From the period from ____ to ____ you were on public assistance. How much did you receive each month?

Five Digit Monthly Income

Part 8 – CRIMINAL HISTORY *(Use Answer Sheet A13)*

---

69. Since your last interview, have you been charged and/or convicted of any offense?

If Yes...Code 1...and...Go to the next question.
If No…Code 0

1-2. What were/are the offenses that you were charged and/or convicted of since your last interview?

Write the full name of offense above each block of 20.
Offenses are listed in alphabetical order, adult offenses first, status offenses second.
Do not read list to respondent.

Offense Codes

01. Assault
02. Assault and Battery
03. Assault with intent (to commit burglary or other felony, to commit criminal sexual conduct, to commit great bodily harm, etc.)
04. Attempted murder
05. Auto theft (UVDA)
06. Battery
07. Breaking and entering
08. Burning of dwelling house/arson
09. Child abuse – First degree (serious, willful, physical harm)
10. Child abuse – Other (including neglect, reckless endangerment)
11. Conspiracy
12. Criminal sexual conduct – First degree (generally, sex involving penetration of an orifice and injury)
13. Criminal sexual conduct - other than rape
14. Delivering of illegal substance (>650 grams)
15. Disorderly conduct
16. Drunk or impaired driving when a personal injury accident occurs
17. Embezzlement
18. Entry without breaking (trespassing)
19. Failure to stop at a personal injury accident (hit and run)
20. Forgery
21. Fraud (including identity theft).
22. Impaired driving (under influence of alcohol, blood alcohol .08-.09%)

23. Joyriding
24. Kidnapping
25. Larceny (theft)
26. Manslaughter – Voluntary
27. Manslaughter - Involuntary
28. Murder (first degree)
29. Murder (second degree)
30. Operating under the influence/OUIL (operating under the influence, .above .09%)
31. Possession or manufacture of illegal substance
32. Prostitution
33. Reckless driving
34. Resisting/Obstructing an officer
35. Robbery (unarmed)
36. Robbery (armed)
37. Shoplifting/Retail Fraud (i.e., price switching)
38. Soliciting of a child
39. Stalking
40. Truancy
41. Unlawful discharge of a firearm without injury
42. Unlawful discharge of a firearm with injury
43. Unlicensed possession/carrying of firearm
44. Vandalism/Property damage
45. Other

Status offenses

46. Minor in possession of alcohol
47. Minor in possession of tobacco
48. Ran away (truant) from home without sufficient cause or refusal of alternative placement
49. Repeatedly disobedient to reasonable and lawful commands of parents, guardian. (incorrigible)
50. Repeated absence (truancy) from school or other educational program

3. Were you convicted for*(offense given)***?**

a. 0. No 1. Yes

4. How many days have you spent in jail since your last interview?

code number of days

Part 10 – SERVICE UTILIZATION *(Use Answer Sheet A14)*

For this next section, I am interested in finding out about different services you have used since your last interview. I will read you a list of services that people often use.Please indicate whether you have used each service since your last interview. Please indicate whether you have actually used the service, not just made an appointment or were sent away. *If participant is currently at a facility, please remember to include code and number of days for that place.*

1-2. *Service type (use code from list below).*
Write the name of the service above each block of 10.

5-7. All together, how many days have you used *(name of service)* **since** *[one year before the present interview]***?**

SERVICE LIST:

01. Shelter/Transitional Housing (placement for short period of time)/Group Home

02. Outreach/Drop-in Centers (walk-in services)

03. Soup Kitchens

04. Medical Services (Hospital outpatient/inpatient, Doctor's Visits, ER) *– Do not ask age of initial use*

05. Counseling Services (Inpatient hospitalization, Counseling, substance abuse treatment, group therapy)

06. Self-Help (Crisis Line, AA,NA, Peer Counseling, mentoring services)

07. Transportation Services (bus passes, car pool, shuttle)

08. Child Care of Services (WIC, medical etc.)

09. Family Independence Agency (talked to a caseworker) since your last interview?

10. Subsidized housing (e.g. Section 8).

Ask participant to specify services (may include above codes)

14. Other (Specify) – ONLY USE AS A LAST RESORT!

Please check over the entire HEIT before handing in the interview

Go to section

Section 2
VICTIMIZATION SCALE

Use the following scale: 1=never, 2= once, 3= a few times, 4= many times

Since your last interview, how often have you been…

a. beaten up
b. robbed
c. asked to do something sexual that you didn't want to do
d. forced to do something sexual that you didn't want to do
e. sexually assaulted or raped
f. threatened with a weapon
g. assaulted and wounded with a weapon
h. asked to break the law, like stealing or dealing drugs
i. gone a whole day without eating because you couldn't get food

Section 3
SUBSTANCE ABUSE FOLLOW-BACK

For this section, I am going to ask you some questions about your experience with alcohol and drugs in the past six months. Most of the questions will have yes/no answers, but for some I will be asking you how many times or how frequently you have done certain things.

1. Have you drunk beer, wine, or liquor in the past 6 months?

0. No *(skip to #23)*
1. Yes *(continue)*

2. Do you only drink on special occasions *(e.g. Holidays)***?**

0. No

1. Yes

3. Do you only drink for religious purposes *(e.g. communion)***?**

0. No
1. Yes

4. Do you consider yourself a "drinker"?

0. No
1. Yes

5. Have you drunk on more than 4 occasions over the past 6 months?

0. No *(Skip to #23)*
1. Yes *(continue)*

6. On any of those occasions, did you have more than one drink?

0. No *(Skip to #23)*
1. Yes *(continue)*

7. Was there a time in the past 6 months when you drank once a week or more?

0. No
1. Yes

8. Using the following choices, how frequently have you drank alcohol in the past 6 months?

0. Never
1. A few times a year or less
2. Monthly
3. Weekly
4. Daily

9. Using the following choices, how much do you drink in one day when you drink?

0. 1-2 drinks
1. 3-4 drinks
2. 5-6 drinks

3. 7-8 drinks
4. > 8 drinks

10. In the last six months, have you ever gotten drunk?

0. No *(skip to #14)*
1. Yes *(continue)*

11. How many times did you get drunk during the past 6 months?

0. 10 or more times
1. 6 to 9 times
2. 3 to 5 times
3. Twice
4. Once
5. Don't know

12. In the last 6 months, did you go on a drinking binge, where you stayed drunk for two whole days or more?

0. No *(skip to #14)*
1. Yes *(continue)*

13. How many times did you have a binge like that in the past 6 months?

0. More than 5 times
1. 2 to 5 times
2. One time only
3. None
4. Don't know

14. Have you gotten into any trouble for drinking or because of something you did while drinking?

0. No
1. Yes

15. Did you try to give up drinking, but couldn't stop?

0. No
1. Yes

16. Did you give up drinking for a short time and then start drinking again?

0. No
1. Yes

17. Did drinking cause any problems for you at school/work?

0. No
1. Yes

18. Did drinking cause problems with how you got along with other people?

0. No
1. Yes

19. Did you drive a car when you had been drinking, or do anything else that might have been dangerous for you or others?

0. No
1. Yes

20. Did you ever get sick or have any physical problems from drinking?

0. No
1. Yes

If respondent didn't endorse any problems in #12-20, then skip #21.

21. Did any of these problems from drinking alcohol *(in items 12-20)* **last for as long as a month?**

0. No
1. Yes

22. In the past 6 months did you attend a group meeting like "AA" because of drinking?

0. No
1. Yes

27. Have you smoked marijuana in the past 6 months?

0. No *(skip to #39)*
1. Yes *(continue)*

28. Was there a time in the past 6 months when you smoked marijuana more than once a month?

0. No
1. Yes

If No, then skip to #30.

29. Would you say that you smoked marijuana monthly, weekly, or daily?

0. Monthly
1. Weekly
2. Daily

30. Have you gotten into any trouble for using marijuana in the past 6 months?

0. No
1. Yes

31. Did you try to give up smoking marijuana, but couldn't?

0. No
1. Yes

32. Did you give up smoking marijuana for a short time and then start using again?

0. No
1. Yes

33. Did using marijuana cause important problems for you at school/work?

0. No
1. Yes

34. Did using marijuana cause problems with how you got along with other people?

0. No
1. Yes

35. Did you drive a car when you had been high/stoned on marijuana, or do anything else that might have been dangerous for you or others?

0. No
1. Yes

36. Did you ever get sick or have any physical problems from using marijuana?

0. No
1. Yes

If respondent didn't endorse any problems in #30-36, then skip #37.

37. Did any of these problems from using marijuana *(in items 30-36)* **last for as long as a month?**

0. No
1. Yes

38. In the past 6 months did you attend a group meeting like "AA" (or "NA") because of using marijuana?

0. No
1. Yes

Note to interviewer: Read all drug names (including terms in parentheses & quotation marks).

In the past 6 months how often have you used the following to get high: *(code frequency)*

39. Uppers, Speed, Amphetamines, Methamphetamines, Crystal Meth ("Crank", "Crystal", "Ice"), Diet pills, Psychostimulants (e.g. Ritalin &Concerta), Ephedrine, Preludin ("Bam").

0. Never
1. 1 to 2 times
2. 3 to 5 times

3. 6 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. more than 40 times
9. don't know

40. Sleeping pills, Downers, Barbiturates, Quaaludes, Seconal, Tuinal, Nembutal,Phenobarbital, Halcion, Restoril, Placidyl, Dalmane.

0. Never
1. 1 to 2 times
2. 3 to 5 times
3. 6 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. more than 40 times
9. don't know

41. Other Tranquilizers, Valium, GHB ("G", "Liquid Ecstasy"), Ketamine "Special K", "K", "Kat"), Rohypnol ("Roofies"), Librium, Ativan, Xanax, Klonopin.

0. Never
1. 1 to 2 times
2. 3 to 5 times
3. 6 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. more than 40 times
9. don't know

42. Heroin, Opium, Morphine, Methadone, Codeine, Tylenol 3s or 4s, Vicodin, Darvon, Demarol, Percodan, Percocet, Dilaudid, or other Narcotics.

0. Never
1. 1 to 2 times
2. 3 to 5 times
3. 6 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. more than 40 times
9. don't know

43. Cocaine, Crack?

0. Never
1. 1 to 2 times
2. 3 to 5 times
3. 6 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. more than 40 times
9. don't know

44. Hallucinogens, LSD, acid, dots (microdots), Peyote, Mescaline, PCP, mushrooms, "Angel Dust", "Windowpane".

0. Never
1. 1 to 2 times
2. 3 to 5 times
3. 6 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. more than 40 times
9. don't know

45. Ecstasy, MDA, "X".

0. Never
1. 1 to 2 times
2. 3 to 5 times
3. 6 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. more than 40 times
9. don't know

46. Inhalants, Nitrous (laughing gas), Glue (paint or other household products) or anything else you sniff or huff, "poppers", "whippets", "snappers", "rush".

0. Never
1. 1 to 2 times
2. 3 to 5 times
3. 6 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. more than 40 times

9. don't know

47. **Other drugs?** *(Record the name of the drug on the bubble sheet).*

0. Never
1. 1 to 2 times
2. 3 to 5 times
3. 6 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. more than 40 times
9. don't know

Section 4
Illegal Behavior Symptom Count

Now I'm going to ask you some questions about things that can get people into trouble. I just want to remind you that everything you tell me is completely confidential. For these questions, please think about the PAST YEAR, that is, since (*name event/month one year ago).*

Code only positive responses as "0" for this section.

1. In the past year, have you snatched someone's purse?

2. Have you held somebody up or robbed someone?

3. Have you threatened someone in order to steal from them?

4. In the past year, have you stolen money from any people you live with?

5. What about shoplifting?

6. Have you stolen at any other time when the person you stole from wasn't around or wasn't looking?

7. Have you told a lot of lies?

8. Have you gotten into trouble for lying?

9. In the past year, have you started any fires without permission?

(If no, skip to question 12)

10. Did the fire cause any damage or hurt anyone?

11. Did you mean for the fire to cause damage or hurt someone?

12. Have you taken off from work without asking [skipped class] in the past year?

13. Since *(name event/month from one year ago)*, **have you broken into a house, building, or car?**

14. Have you broken something or messed up some place on purpose, like breaking windows, writing on a building, slashing tires?

15. In the past year, have you tortured animals or hurt them on purpose?

16. Have you ever had any experience with sex or been sexually active, that is, more than hugging and kissing?

(If no, skip to question 19)

17. In the past year, have you done anything sexual with someone for money or for something else you wanted?

18. In the past year, have you forced someone to do something sexual with you against their will?

19. In the past year, have you started any serious physical fights where there was punching or hitting?

(If no, skip to question 21)

20. Have you started at least four fights like that in the last year?

21. In the past yearhave you used a weapon in a fight, like a bat or brick, or a bottle or knife or gun?

22. In the past year, have you ever been physically cruel to someone or tried to cause them pain?

(If no, skip to question 25)

23. Was this in a fight, or when you lost your temper?

24. Did it only happen in a fight, or when you lost your temper?

25. Within the last year, have you ever made money by finding customers for prostitutes or call girls?

26. Have you made money outside the law by buying or selling stolen property or selling drugs or running numbers?

27. Within the last year, have you been sued for a bad debt or had things you bought taken back because you didn't make the payments?

(If no, skip to question 29)

28. If yes, did this happen more than twice?

29. Have you been fired from more than one job within the last year?

30. On any job you've had within the last year, were you late or absent an average of 3 days a month or more?

31-32. How many times have you changed jobs within the last year?
Enter number of times

33. Have you used an alias or an assumed name within the last year?
If used only pen or stage name, skip to the next section.

Section: 5
BRIEF SYMPTOM INVENTORY

Now I'm going to read you a list of problems and complaints that people sometimes have. For each one, I'd like you to select one of the answers from this list *(indicate corresponding responses)* **that best tells how much discomfort the problem has caused you in the past 2 WEEKS. Please remember, I want to know how much this problem has bothered you in the past two weeks, not how often it has happened.**

A. not at all
B. a little bit
C. moderately

D. quite a bit
E. extremely

In the past two weeks, how much have you been bothered by:

81. Nervousness or shakiness inside.

82. Faintness or dizziness.

83. The idea that someone else can control your thoughts.

84. Feeling others are to blame for most of your troubles.

85. Trouble remembering things.

86. Feeling easily annoyed or irritated.

87. Pains in your heart or chest.

88. Feeling afraid in open spaces.

89. Thoughts of ending your life.

90. Feeling that most people cannot be trusted.

91. Poor appetite.

92. Suddenly scared for no reason.

93. Temper outbursts that you could not control.

In the past two weeks, how much have you been bothered by:

94. **Feeling lonely even when you are with people.**

95. **Feeling blocked in getting things done.**

96. **Feeling lonely.**

97. **Feeling blue.**

98. **Feeling no interest in things.**

99. **Feeling fearful.**

100. **Your feelings being easily hurt.**

101. **Feeling that people are unfriendly or dislike you.**

102. **Feeling inferior to others.**

103. **Nausea or upset stomach.**

104. **Feeling that you are watched or talked about by others.**

105. **Trouble falling asleep.**

106. **Having to check and double check what you do.**

107. **Difficulty making decisions.**

108. **Feeling afraid to travel on buses, subways, or trains.**

109. **Trouble getting your breath.**

110. **Hot or cold spells.**

111. **Having to avoid certain things, places, or activities because they frighten you.**

112. **Your mind going blank.**

113. **Numbness or tingling in parts of your body.**

114. **The idea that you should be punished for your sins.**

115. **Feeling hopeless about the future.**

116. **Trouble concentrating.**

In the past two weeks, how much have you been bothered by:

117. Feeling weak in parts of your body.

118. Feeling tense or keyed up.

119. Thoughts of death or dying.

120. Having urges to beat, injure, or harm someone.

121. Having urges to break or smash things.

122. Feeling very self-conscious with others.

123. Feeling uneasy in crowds.

124. Never feeling close to another person.

125. Spells of terror or panic.

126. Getting into frequent arguments.

127. Feeling nervous when you are left alone.

128. Others not giving you proper credit for your achievements.

129. Feeling so restless that you couldn't sit still.

130. Feelings of worthlessness.

131. Feeling that people will take advantage of you if you let them.

132. Feelings of guilt.

133. The idea that something is wrong with your mind.

Section 6
BEHAVIORS SURVEY

The next set of questions will be about sexual behaviors. Keep in mind that your answers will all be kept confidential and no one outside our research team will be able to see them.

1. Have you had sexual intercourse, oral sex, or anal sex in the last six months?

0. No 1. Yes

If No, ask only questions with a "" in front of them for the remainder of this section.*

4-5. How many sexual partners would you say you've had in the past 6 months?

6. How often have you had sexual relations in the past 6 months (this includes intercourse, oral sex or anal sex)? *(read choices)*

0. Not at all
1. Rarely (a few times a year or less)
2. Sometimes (1-4 times a month)
3. Several times a week
4. Just about every day

For the following two questions, please answer with a percent of time.

7. In general, how often in the past 6 months have you and your partner(s) used a birth control method when you have sex?

0. Never (0% of the time)
1. Rarely (1-24% of the time)
2. Sometimes (25-49% of the time)
3. Often (50-74% of the time)
4. Usually (75-99% of the time)
5. Always (100% of the time)
8. Don't Know/ Don't Remember

21. How often in the past 6 months have you and your partner(s) used condoms when you have had sex?

0. Never (0% of the time)
1. Rarely (1-24% of the time)
2. Sometimes (25-49% of the time)
3. Often (50-74% of the time)
4. Usually (75-99% of the time)
5. Always (100% of the time)

8. Don't Know/ Don't Remember

Please answer YES or NO to each of the following questions. I would like to know if any of these things have occurred in the past 6 months.

code only positive responses as: 0. Yes

***22. Have you used needles to inject street drugs?**

If only asking questions with an "", go to 57*

23. Have you received money for sex?

24. Have you received drugs for sex?

25. Have you had sex while you were drunk or high?

26. Have you had sex with someone who injects street drugs with a needle?

29. Have you had sex with someone who has AIDS, symptoms of AIDS, or a positive test for the AIDS virus?

33. Have you ever had anal intercourse (sex with penis in the rectum)?

34. Have you had oral sex (mouth on the penis or vagina)?

35. In the past 6 months, have you had sex with only men, only women, or both men and women?

1. Only men
2. Only women
3. Both men and women

If only asking questions with an "", Go to 57*

Have you ever had a sexually transmitted disease?

0. No 1. Yes

If yes, What STD were you infected with?

Code

1. Syphilis
2. Genital Herpes
3. Gonorrhea
4. Chlamydia
5. Pelvic Inflammatory Disease (PID) *(female only)*
6. Bacterial Vaginosis*(female only)*
7. Scabies
8. Trichomoniasis
9. Genital Warts
10. Pubic Lice (Crabs)
11. HIV (the AIDS virus)
12. Other

Please answer YES or NO to the following questions:

51. Have you gotten pregnant in the past 6 months? (ask of women only)
Have you gotten a woman pregnant in the past 6 months? (ask of men only)

0. No 1. Yes

52. Have you had an abortion in the past 6 months? (ask of women only)
Has a woman you've impregnated aborted that pregnancy in the past 6 months? (ask of men only)

0. No 1. Yes

***57. Have you ever been tested for the HIV (AIDS) Virus?**

0. No 1. Yes

***## Did you get the results?**

0. No 1. Yes

If no, skip to next section.

***58. Were the test results positive or negative?**

0. Negative 1. Positive 2. Declined to Answer

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ABSTRACT

LONGITUDINAL OUTCOMES OF YOUTH WHO AGE OUT OF FOSTER CARE

by

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Each year in America, between 20,000 and 30,000 youths reach an age, typically 18 years, when they must exit the foster care system due to age restrictions, in a process referred to as aging out (U. S. Department of Health and Human Services, 2016). These youths disproportionately experience a host of negative outcomes, including high rates of homelessness and precarious housing, high levels of psychological distress and victimization, increased risk of substance abuse, lower wages, increased sexual risk taking, and poorer educational attainment when compared to their same-age peers (Courtney & Heuring, 2005; Keller, Cusick, & Courtney, 2007; Masten, Obradovic, & Burt, 2006).

The current study followed 57 aged out youths during an 8-year period following their aging out from foster care in Metro Detroit. The sample was representative of the larger aged-out population in the area. Two interviews were conducted via phone, one at 3.5 years post-foster care exit and another at 8.28 years, on average. Variables assessed included demographic information, foster care case information, psychological distress, deviance, lifetime victimization, substance abuse/dependence, and risky sexual behaviors, as well as housing, educational, and employment outcomes.

The present aimed to describe a representative sample of aged-out former foster youth throughout emerging adulthood using retrospective longitudinal data and to examine possible predictors of negative outcomes among former foster youth. Results suggest decreases in time spent homeless and deviant behaviors, and increases in income from employment over time. Additionally, no change in risky sexual behaviors, psychological distress, or victimization was found, indicating sources of persistent difficulties among aged out youth. Multivariate predictors of outcomes were largely nonsignificant, likely due to low-sample size. However, race was found to predict lower educational attainment at the second interview, and victimization was found to predict multiple negative outcomes across both follow-up periods. The latter highlights the importance of trauma-informed interventions and policies. Additionally, suggestions for future research and policy implications are explored.

AUTOBIOGRAPHICAL STATEMENT

Tegan Lesperance is originally from Indian Harbour Beach, Florida, and she completed her undergraduate degrees in Psychology and Women's Studies, minoring in Sociology, at the University of South Florida, in Tampa, Florida. During her undergraduate career, she studied risky sexual behaviors among participants in a family dependency treatment court.

As a graduate student of Clinical Psychology at Wayne State University, Tegan continued to develop her passion for working with marginalized populations, both clinically and as a member of Dr. Paul A. Toro's Community Research laboratory.