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Adverse Childhood Experiences and Social Determinants of At-Risk Populations: A Literature Review and Annotated Bibliography

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TABLE OF CONTENTS

INTRODUCTION

Childhood exposure to adverse experiences can have long-term, detrimental impacts on a child's physical, social, and psychological development. Exposure to adverse childhood experiences (ACEs) has the potential to negatively impact a child's development and transition into adulthood and can be particularly impactful on children in the foster care system, American Indian and Alaska Native (AI/AN) tribal members, and rural and urban youth. While there is no consensus on what constitutes an adverse childhood experience, ACEs typically include abuse, neglect, and maltreatment and may range from exposure to violence in the family or community to the presence of parental mental health conditions (e.g., Dube et al., 2001; Reid, 2011; De Ravello, Abeita, & Brown, 2008; Wade et al., 2014). In addition to ACEs are social determinants of health—geographic, demographic, educational, financial, or environmental factors that act as barriers for members of a community to fulfill various needs (Abbott & Williams, 2015). While an individual's health is determined by an individual's biology, genetics, and behavior, an individual's social environment, physical environment, and the health services available to them are also primary determinants (Centers for Disease Control and Prevention, 2014). These concepts are crucial to understand due to associated mental health outcomes and physical, financial, and social difficulties experienced by adults who experienced adverse experiences during childhood (Wade et al., 2014). Dahlgren and Whitehead's (1991) research on the five levels of social determinants of health is the cornerstone on which social determinants of health are conceptualized. At the core of determinants of health is an individual's age, sex, and genetic make-up. At the second level are individual lifestyle factors, including individual-level choices, such as eating or exercise habits. At the third level are social and community networks influenced by family, friends, neighbors, and/or the community. At the fourth level are living and working conditions in areas such as housing, education, employment, health care, and food production. At the fifth level are general socioeconomic, cultural, and environmental factors that include major infrastructures (Dahlgren & Whitehead, 1991). Understanding the level of social determinants of health inequalities are important because they determine at what level solutions can be targeted. For example, social determinants of health affecting an individual's ability to form attachments with caregivers (Bruskas & Tessin, 2013), reliance on food support systems (National Indian Council of Aging, n.d.), or exposure to violence in the community or in the home (McDonald & Richmond, 2008) require individual and community-based solutions; structural policy changes, such as tax policies, are relevant at the fifth level (Dahlgren & Whitehead, 1991).

Researchers from the Centers for Disease Control and Prevention (CDC) estimated the average lifetime cost of an individual who experienced nonfatal maltreatment as a child to be $210,012. Expenses included costs related to childhood and adult health care/medical treatment, productivity losses, child welfare cases, criminal justice involvement, and special education needs. Based on this estimation, researchers calculated the economic burden of new childhood maltreatment cases in 2008 and estimated the United States would spend approximately $124 billion over the lifetime of children who had new maltreatment cases in 2008 (Fang, Brown, Florence & Mercy, 2012). At the individual level, abuse, neglect and maltreatment have been shown to increase a child's risk for psychiatric disorders (Garcia et al., 2015). A study on the mental and physical effects of foster care placement found that children placed in foster care were more likely to have learning disabilities, developmental delays, asthma, obesity, and speech problems (Turney & Wildeman, 2016). As cited in Fang et al, Currie and Widom found that the presence of maltreatment correlated with earning approximately $5,890 (2010 dollars) less than individuals without a history of childhood neglect and or abuse (Fang, Brown, Florence & Mercy, 2012). The social impact of ACEs can range from social phobias (Pecora et al., 2005) to difficulty in forming and maintaining relationships as an adult (Bruskas & Tessin, 2013). As such, the impact of ACEs on individuals is wide and varied and their effects extend from childhood into adulthood.

The objective of this literature review and annotated bibliography is to identify significant research on ACEs and social determinants of health found in at-risk populations, including children in and aging out of foster care, runaway and homeless youth, unaccompanied alien children (UAC), AI/AN tribal youth, and rural and urban youth. The goal of this literature review is to inform trafficking prevention efforts by leveraging knowledge gained from existing research. These populations were selected as they experience an increased risk for ACEs and there is a strong correlation between reported childhood abuse and other ACEs in individuals who have experienced trafficking (Abas et al., 2013; Servin et al., 2015; Zimmerman et al., 2006). Furthermore, exploration into the available research on these populations can help inform the anti-trafficking field, as literature on ACEs and individuals who have experienced trafficking is limited. Thus, this literature review affords an opportunity to take stock in the most current research on ACEs and social determinants of health and leverage that knowledge to the field of trafficking, as applicable.

The literature review is organized as follows: first, adverse childhood experiences and social determinants of health are discussed for children in foster care, runaway and homeless youth, unaccompanied alien children, AI/AN tribal youth, and rural and urban youth followed by the implications of ACEs and social determinants of health for these populations and their risk of trafficking. The final section focuses on prevention and resiliency. After the conclusion of the literature review, an annotated bibliography is provided with a synopsis of 33 relevant articles published between 2000 to 2017 from various disciplines, including psychology, youth studies, public health, and health care.

Methodology

A search for academic literature was conducted on Academic Search Complete, Education Research Complete, ERIC (Education Resource Information Center) and Google Scholar for peer-reviewed journal articles published within the last 10 years. The key words included *adverse childhood experiences*, *social determinants of health*, *foster care youth*, *youth aging out of foster care, homeless youth, runaway youth, unaccompanied alien children, American Indian and Alaska Native (AI/AN) youth*, *rural and urban youth*, *child/youth labor trafficking in the United States*, *child/youth sex trafficking in the United States, resiliency, and protective factors*. Furthermore, web content was reviewed from a variety of sources, including federal and state agencies and non-governmental organizations.

Adverse Childhood Experiences and Social Determinants of Health

Researchers continue to contribute to the child welfare field's understanding of mental, physical, and social disadvantages caused by ACEs and social determinants of health. Earlier works primarily focused on the ACEs of abuse, neglect, and maltreatment (e.g., Dube et al., 2001; Anda et al., 1999), but more recent works have expanded beyond this narrow definition to examine the impacts of other ACEs. The expanded definition of ACEs includes substance use issues (e.g., Braciszewski & Colby, 2015; Rebbe et al., 2017; Reid, 2011; Warne & Lajimodiere, 2015); mental health conditions (e.g., Abas et al., 2013; Baiden, Steward, & Fallon, 2017; Brockie et al., 2015; Garcia et al., 2015; Turney & Wildeman, 2016); violence in the family (e.g., De Ravello, Abeita, & Brown, 2008; Reid et al., 2016; Wade et al., 2014); violence in the community (e.g., Wade et al., 2014); and community characteristics such as poverty (e.g., Hopper, 2017).

Research suggests a broad range of ACEs result in negative health outcomes, to include physical disabilities or mental health conditions (Rebbe et al., 2017; Wade et al., 2014). The physical effects of ACEs can range from obesity, asthma and speech problems (Turney & Wildeman, 2016). Baiden and

colleagues found a correlation between nonsuicidal self-injury and ACEs (Baiden, Steward, & Fallon, 2017). In their study, up to 80 percent of individuals who engaged in nonsuicidal self-injury report a history of ACEs. Moreover, these effects are more likely to affect minority and socioeconomically disadvantaged communities such as children from foster care and rural and urban youth who may experience increased rates of ACEs and are more susceptible to negative social determinants of health (Abbott & Williams, 2015). Social determinants of health are not negative, but the inequalities faced by many populations of concern can lead to negative outcomes. Social determinants of heath can include access to health care or education systems, transportation options, language/culture, and socioeconomic status as well as exposure to violence (U.S. Department of Health and Human Services, 2018a). Where an individual lies on the spectrum of a social determinant of health will determine how their health is affected. For example, poverty (i.e., low socioeconomic status) is correlated with decreased physical health and difficulty in obtaining stable housing (Abbott & Williams, 2015). While similarities in ACEs and social determinants of health inequalities exist between youth populations, the following sections demonstrate the unique experiences of various populations.

Youth in Foster Care

Approximately 6 percent of American children will be exposed in some capacity to the foster care system. Many of these children will have experienced abuse, neglect, and/or maltreatment from their families prior to entering foster care, and numerous studies document the negative effects of maltreatment and its long-term consequences on mental illness and social developmental outcomes (Garcia et al., 2015; Rebbe et al., 2017; Reid, 2011). Once placed in foster care, these effects can be exacerbated as children experience additional adverse events with impacts that last even after youth leave the foster care system. While not all foster youth will experience ACEs and their subsequent negative consequences, the research is clear that youth previously in foster care are at increased risk of homelessness, employment difficulties, financial burdens, and mental health conditions (e.g., Pecora et al., 2005; Rebbe et al., 2017; Turney & Wildeman, 2016). This research is discussed in more detail below.

In the first nationally representative study analyzing the relationship between ACEs and youth in foster care, Turney and Wildeman (2017) found that youth in foster care are more likely to be exposed to ACEs compared to children who have had no interaction with the foster care system. Additionally, youth in foster care are more likely to have a learning disability, asthma or speech problems, a diagnosis of attention-deficit disorder/attention-deficit hyperactivity disorder (ADD/ADHD), hearing and vision problems, anxiety, behavioral challenges, and depression (Turney & Wildeman, 2016) compared to youth not in foster care.

By reviewing the case files of more than 650 previous youth in foster care and conducting interviews with more than 450, the Northwest Foster Care Alumni Study (2005) found that 50 percent of children previously in foster care met the diagnostic criteria for at least one mental health diagnosis. The study found that youth previously in foster care overwhelmingly faced difficulties in mental health, education, employment, and finances after leaving the foster care system. They were more likely to have a diagnosable mental health condition with more than 54 percent having one or more disorders, including posttraumatic stress disorder (PTSD), major depression, and social phobia (Pecora et al., 2005).

An additional social determinant of health includes substance use and tobacco dependency, which is more likely to develop with youth in foster care. The U.S. Department of Health and Human Services (2005) found that 48 percent of youth ages 11–15 in out-of-home care (e.g., foster, kinship foster, or group care) reported using tobacco at least once. Illegal substance use was reported by 13 percent of youth ages 11 and older whose families were investigated for maltreatment, with children in out-of-

home care more likely to report at least one illegal substance use. Moreover, 74 percent of children in group care reported at least one instance of illegal substance use, making them 9 times more likely to use illegal substances than children not in foster care placement or children not receiving welfare services. Lastly, youth in group homes reported a higher frequency of illegal substance use than those in foster care (U.S. Department of Health and Human Services, 2005). Therefore, as Braciszewski and Colby (2015) argue, it is imperative that youth in foster care obtain screening and intervention as dependency developed in childhood is likely to continue into adulthood.

While the former studies illustrate the relationship between ACE's and foster care, other research has explored aspects of foster care that contribute to ACEs, and studies identify placement in multiple foster care settings as an ACE that is unique to youth in foster care (Bruskas & Tessin, 2013; Garcia et al., 2015; Newton, Litrownik, & Landsverk, 2000). Youth in foster care experience multiple living environments, occasionally within a short period of time. The lack of a stable family life and movement between placements is known as "placement instability." Placements included "initial shelter care, foster care, kinship care, treatment foster care, group homes, residential treatment, independent living placements, adoptions, and juvenile justice placements" (Garcia et al., 2015 p. 3296). Due to this instability, children may find it difficult to form bonds with children and adults and can miss vital developmental interactions by failing to form relationships as a child. The inability for some youth in foster care to bond and form attachments is one of the most significant social determinants of health they will face, and it is likely to affect their ability to form and maintain relationships as an adult (Bruskas & Tessin, 2013). These findings are supported by an earlier study conducted by Newton and colleagues (2000) that sought to identify how foster care placement influenced behavioral problems in children. In the study, 173 out of 415 children did not present behavioral issues at the initial screening of the study. By the second assessment (18 months after the initial screening), there was a noticeable and positive correlation between the number of placements and internalizing and externalizing behavioral problems (Newton et al., 2000).

Despite the increased risk of ACEs among youth in foster care, the research suggests that these youth are less likely to get needed services. Children who experience ACEs and develop subsequent mental health conditions can face difficulty in obtaining appropriate mental health services in the foster care system. Hurlburt and colleagues (2004) found that of 2,823 child welfare cases open for investigations of child abuse or neglect, 42 percent had clinically significant mental health needs, but only 28 percent received any services. Youth in foster care are likely to face barriers to obtaining health services, including a lack of actual and perceived confidentiality between the youth and provider/case worker, placement instability, and subsequent interpersonal challenges that make it difficult for youth in foster care to trust and develop a bond with providers (Braciszewski & Colby, 2015).

This trend is exacerbated when considering services – especially mental health services – and minority youth. The Hurlburt and colleagues 2004 study found that white children in the foster care system received more mental health services than children of color (Hurlburt et al., 2004). This is particularly concerning considering the proportion of minority children who are or who have been in the foster care system (Turney & Wildeman, 2017). One study that examined data on all children in foster care from 2000–2011 found that 1 in 17 children in the United States will experience foster care placement, but risk of placement varied significantly based on a child's race. The authors found 1 in 7 American Indian children (15 percent) and 1 in 9 African American children (12 percent) will experience foster care placement, with white children having a less than 5 percent cumulative risk of placement (Wildeman & Emanuel, 2014). In comparison, the 2010 census found the composition of the United States to be 1 percent AI/AN, 13 percent African American, and 72 percent white (U.S. Department of Commerce, 2011). As such, the race of a child in foster care can have a significant impact on the services they receive and indicate an area of concern as minority youth—particularly AI/AN and African American

youth—are disproportionately represented in the foster care system. Research also suggests that a lack of service provision remains after exiting foster care.

Youth Aging Out of Foster Care

Youth aging out of foster care can face additional challenges as they transition into adulthood and lose services provided through the foster care system (Fowler et al., 2017). One significant challenge is obtaining permanent housing. While housing mobility is considered a normative marker of young adulthood, youth aging out of foster care have been found to experience increased mobility and precarious housing (i.e., not permanent housing), and they are less likely to be able to pay rent than nonfoster youth (Dworsky et al., 2012). In a study of 1,213 Washington state youth who aged out of foster care, more than a quarter (28 percent) experienced homelessness within 12 months of leaving foster care. Young adults with a history of unstable housing, who changed schools frequently, or experienced two or placements were more likely to experience homelessness, compared to those who had been placed with a relative who were less likely to experience homelessness (Shah et al., 2015). More than one-third of 601 participants in a study of Los Angeles, Austin, and Denver homeless youth reported a history of foster care. The majority of homeless foster youth (81 percent) were dependent on others (e.g., friends, family, and welfare) for income, and 75 percent reported informal employment (e.g., panhandling, dealing drugs, stealing, and prostitution) with only 20 percent having full-time legal employment (Bender et al., 2015).

Bender and colleagues also found that many former foster youth experiencing homelessness met the diagnostic criteria for substance use disorder (69 percent), depression (36 percent), and PTSD (26 percent) (Bender et al., 2015). High rates of mental health problems is concerning, as McMillen and Raghavan (2009) found that once youth left foster care, those receiving mental health services, including psychotropic medication and outpatient therapy, dropped by 60 percent the month after leaving foster care. The drop in service use was primarily attributed to young adults exercising their choice to stop service, but a minority of young adults reported cost as a barrier to service use. For this group, Medicaid coverage is necessary for continuity of service use (McMillen & Raghavan, 2009).

Youth aging out of foster care face additional challenges in becoming self-sufficient. Rates of completing high school for youth previously in the foster care system were equal to youth who were not in foster care, but the individuals of one study were six times as likely to obtain completion through GED programs. Youth previously in foster care also experienced lower rates of employment and health coverage, and more than 33 percent were at or below the poverty level (Pecora et al., 2005). As youth age out of the foster care system, intensive transitional case management support is crucial. The effects of adverse experiences on youth in foster care have the potential to disrupt executive functioning skill development as prolonged trauma exposure can affect an individual's self-regulation, problem-solving, and decision-making skills (U.S. Department of Health and Human Services, 2017). As such, youth need a combination of concrete resources (e.g., driver's licenses, cash, or housing supplies) and the knowledge and skills for independent living (e.g., understanding how to obtain housing or navigating the health care system). Readiness for independent living can vary significantly; therefore, programs used to increase life skills should be rigorously evaluated, and transition plans should be inclusive of "planning for supportive relationships, community connections, education, life skills assessment and development, identity formation, housing, employment experience, physical health, and mental health" (Pecora et al., 2005, p. 50).

Runaway and Homeless Youth

Runaway and homeless youth often face similar challenges experienced by former foster youth and those aging out of the system, primarily unstable housing. Housing is particularly important for young adults in achieving self-sufficiency. Unstable housing can act as a barrier to achieving education/training and gaining and maintaining employment. Housing status also contributes to an individual's physical and mental health as unstable housing limits access to services (Dworsky et al., 2012).

In a 15-year longitudinal study of runaway youth, 31 percent of those who had been in foster care ran away, compared to 8 percent of runaways who had never lived in foster care (Benoit-Bryan, 2011). Bender and colleagues' (2015) study on homeless youth provides insight into the relationship between ACEs and runaway and homeless youth. The majority of respondents (79 percent) reported experiencing two or more forms of abuse before leaving home. Of that, 46 percent reported physical and emotional abuse, and 30 percent reported physical, emotional, and sexual abuse prior to homelessness. Only 7 percent of the sample did not report a history of childhood abuse (Bender et al., 2015). For runaway and homeless youth, leaving home does not guarantee a reprieve from abuse with many experiencing forms of street victimization. In the same study, one-third of homeless youth (33 percent) reported one occurrence of street victimization and 28 percent reported two or more street victimizations, while 38 percent reported no street victimization. Victimization prior and during homelessness can have significant consequences on an individual's mental health. Researchers found that abuse prior to homelessness was associated with PTSD and street victimization was associated with substance use disorder. Both forms of abuse were associated with depression (Bender et al., 2014).

In addition, involvement with the juvenile justice system is frequently reported among runaway and homeless youth. Through interviews with 654 runaway and homeless youth, the Administration on Children, Youth and Families found that approximately 44 percent of those interviewed had been in jail, prison, or a juvenile detention facility; 78 percent had at least one incidence of contact with law enforcement; and 62 percent had been arrested (U.S. Department of Health and Human Services, 2016b). Youth may commit "survival crimes" in an attempt to obtain basic needs such as food, shelter, or protection, and in the event they are unable to pay fines, may be arrested. This is particularly concerning as juvenile justice involvement is linked to physical and/or mental health challenges, poor educational outcomes, difficulty in obtaining employment, and criminal justice system involvement as an adult (Coalition for Juvenile Justice, 2016).

When asked how they obtained money in the last month, half of the youth interviewed reported receiving state vouchers or public assistance; 41 percent through chores or odd jobs; 39 percent from parents, relatives, or caretakers; 30 percent from borrowing; and 29 percent from panhandling. Other means of income included selling drugs (17 percent), stealing from a store or business (16 percent), selling blood or plasma (10 percent), stealing money from someone (7 percent), and breaking and entering and stealing from a house or a car (5 percent). Interviews also found that many youth traded sex for something they needed—24 percent reported for money, 28 percent for a place to spend the night, 18 percent for food, 12 percent for protection, and 11 percent for drugs (U.S. Department of Health and Human Services, 2016b).

The impact of homelessness on youth and adulthood is varied. In the Runaway Youth Longitudinal Study, Benoit-Bryan (2011) found that running away during childhood influenced an individual's health, economic security, and involvement with the justice system in adulthood. Running away was correlated with suicidal ideation and suicide attempts, and former runaways rated their general health lower than

youth who have never runaway. This population was also more likely to smoke and be diagnosed with a sexually transmitted disease as an adult. On average, the income of former runaways was $8,800 lower, and individuals were more likely to have lower education rates and less likely to have a high school diploma or GED. In terms of their experience with the justice system, former runaways were also more likely to be arrested as an adult and 99 percent more likely to sell drugs as an adult compared to those who did not run away as a youth (Benoit-Bryan, 2011).

Unaccompanied Alien Children (UAC)

According to the U.S. Department of Health and Human Services, unaccompanied alien children (UAC) include "children who enter the country without their parent or legal guardian and children who for other reasons have been separated from their parent or legal guardian" (U.S. Department of Health and Human Services, 2018b, p. 1). In 2017, the Office of Refugee Resettlement received 40,810 referrals for UAC from the Department of Homeland Security. UAC primarily migrated from three countries: Guatemala (45 percent), El Salvador (27 percent), and Honduras (23 percent), with 3 percent migrating from "all other countries" and less than 3 percent originating from Mexico. More than two-thirds were male (68 percent) and age 15 years or older (69 percent). In comparison, 32 percent were female and 17 percent of UAC were age 0–12 (U.S. Department of Health and Human Services, 2018c).

Poverty and exposure to violence in originating countries—both ACEs and social determinants of health inequalities—are the two most common reported reasons for migration (Estefan, Ports, & Hipp, 2017). The United Nations High Commissioner for Refugees (UNHCR), the UN Refugee Agency, interviewed 404 children from Guatemala, El Salvador, Honduras, and Mexico displaced from their countries of origin and migrating to the United States. More than half of the children reported deprivation in the form of poverty or a lack of basic necessities. Economic security is particularly important for children as they are reliant on adults during an important developmental period and in which poverty can increase a child's risk for violence and abuse, especially when combined with other risk factors like mental illness and substance use. Nearly half of all children (48 percent) experienced or feared community violence by criminal actors, including drug cartels, gangs, and state actors. Reports of actual or feared abuse and violence in the home were common (21 percent) and approximately a tenth of children feared or experienced violence in the community and in the home (UNHCR, 2014). These findings are consistent with Estefan and colleagues (2017) who found that exposure to violence, community violence (e.g., organized crime), and interpersonal violence (i.e., child maltreatment, violence in the home) is one of the most widely reported factors driving the migration of UAC into the United States.

While UAC are generally physically healthy, they are more likely to face mental health challenges, including depression, anxiety, and PTSD (Estefan et al., 2017). These challenges may be a result of violence exposure in their originating country, stress as a result of their migration, immigration proceedings (e.g., stays in detention facilities), and/or social stressors (Alvarez & Alegría, 2016). Exposure to violence in the family and the community can have severe impacts on youth as seen in UAC who frequently cite violence as a primary factor for migrating. However, migration poses its own risk and can increase an individual's risk of trafficking. Exposure to violence during their journey includes an increased risk of smuggling and/or trafficking (Estefan et al., 2017). Unique to Mexican children interviewed by UNHCR were reports that 38 percent of Mexican youth were recruited and exploited to participate in human smuggling (UNHCR, 2014). This is mirrored in the U.S. Department of State's 2015 Trafficking in Persons Report, which warns that migrants are susceptible to forced labor or exploitation on their migration route (U.S. Department of State, 2015). Transferring to the care of family members or caregivers can also cause significant distress and separation from parents or caregivers can make forming future attachments more difficult for UAC. In the event of family reunification, youth

and their families can become disillusioned and struggle to reconnect, making integration even more difficult. Even after placement, mental health challenges can persist, necessitating sustained treatment.

American Indian and Alaska Native Tribes

American Indian and Alaska Native (AI/AN) communities have experienced severe forms of interpersonal and systemic trauma and discrimination including involuntary removal of children, abuse in boarding schools, extreme poverty and starvation on reservations, military action, infectious diseases, and involuntary removal from reservations (Brockie et al., 2015). These types of intergenerational and vicarious traumas are passed down to younger generations (Brockie et al., 2015). According to Evans-Campbell (2008), intergenerational trauma, also referred to as historical trauma, multigenerational trauma, and collective trauma, is "a collective complex trauma inflicted on a group of people who share a specific group identity or affiliation…" and is "the legacy of numerous traumatic events a community experiences over generations and encompasses the psychological and social responses to such events." One of the most controversial ACEs that negatively impacted AI/AN families was the result of the Civilization Fund Act of 1819 that provided funding for educating American Indians and subsequent federal laws that required removal of children from tribes and placement into boarding schools. While forced removal of children from tribes no longer occurs, many current AI/AN community members experienced this for themselves (Warne & Lajimodiere, 2015). This policy was particularly harmful, and the abuse and neglect from this period is the genesis of some intergenerational trauma (Brockie et al., 2015). Those who endured this abuse have an increased likelihood to abuse their own children, perpetuating a circle of abuse in these communities (Warne & Lajimodiere, 2015). The historical trauma felt by children in these situations is one of the many ACEs AI/AN children face in their community.

AI/AN tribal members experience ACEs at a much higher rate than their white counterparts (Kenney & Singh, 2016). A 2003 study of seven American Indian tribes looked at the relationship of ACEs and alcohol dependency among members. The ACEs examined in this study included (1) parental alcoholism, (2) physical abuse, (3) physical neglect, (4) sexual abuse, (5) emotional abuse, (6) emotional neglect, (7) boarding school placement, (8) foster care placement, and (9) adoption. The study found that 86 percent of the 1,670 participants from seven tribes experienced one or more ACEs, and 33 percent experienced four or more ACEs. More than half of the study's participants reported parental alcoholism, physical abuse, and physical neglect—the most commonly reported types of maltreatment—and one-quarter of the study participants attended boarding school (Koss et al., 2003). One of the most significant consequences of ACEs in these communities are the rates of alcohol dependency and suicide (Koss et al., 2003). The study found that as the number of ACEs increases, AI/AN women experienced an increased risk of alcohol dependency. Women with four or more types of ACEs were seven-times more likely to develop alcohol dependency. Men, however, were four-times more likely to develop alcohol dependency when exposed to three different categories of ACEs but three-times more likely when exposed to four or more ACEs (Koss et al., 2003).

These findings highlight two major implications. First, there is some indication that, for men, there is a threshold effect regarding the number of ACEs and associated risk of alcoholism. Second, the types of ACEs experienced by men and women affected participants differently. Men had an increased risk when reporting a history of physical and sexual abuse during childhood. Women experienced increased risk with a history of sexual abuse and boarding school attendance. In general, however, the study found the correlation of exposure to sexual abuse during childhood and subsequent alcohol dependency to be similar to the non-AI/AN men and women (Koss et al., 2003).

In a more recent study, De Ravello, Abeita, & Brown (2008) examined the impact of ACEs and outcomes with a sample of incarcerated American Indian women. The ACEs in this study included physical neglect (e.g., inadequate housing or lack of health care); a dysfunctional family member (e.g., a family member with a substance use problem, an incarcerated family member, or family member with a mental illness); witnessing violence in the home; experiencing physical abuse by a family member or loved one; and experiencing sexual abuse by a family member or loved one. The authors found that all but one woman in the study had a history of ACEs, and 81 percent reported two or more ACEs. The most prevalent ACEs included witnessing violence in the home (72 percent), a family member with a substance use problem (75 percent), an incarcerated family member (69 percent), and being sexually abused (53 percent). Most women (83 percent) had previously attempted suicide, and women with a history of four to five ACEs were seven times more likely to attempt suicide than women with zero to three ACEs. Of those who reported drinking alcohol, 54 percent started before age 15, and half of the study participants reported smoking marijuana/hashish before age 15 (De Ravello, Abeita, & Brown, 2008).

Social determinants of health inequalities in this population also includes increased rates of poverty and reliance on food support systems. Based on data used from the 2016 American Community Survey, the U.S. Department of Agriculture (2017) found the poverty rate of nonmetro AI/AN at 32 percent in comparison to nonmetro Black/African American (33 percent) and nonmetro white (15 percent). For metro populations, AI/AN experienced poverty rates at twice the level of white metro populations (23 percent versus 11 percent, respectively) (U.S. Department of Agriculture, 2017). An additional determinant of health for this population includes a reliance on food support systems, including the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and the Food Distribution Program on Indian Reservations (FDPIR). While changes to WIC and FDPIR have improved options for nutritional foods, historically such supplemental programs have been found to decrease health outcomes and are correlated with increased reliance on formula feeding rather than breastfeeding and subsequent increased risk of diabetes (Warne & Lajimodiere, 2015). AI/AN populations are more likely to experience food insecurity as they are located in “food deserts” in remote and isolated areas with limited food supplies and fresh food (Partnership with Native Americans, 2017). In addition to poor dietary options, AI/AN populations are likely to have lower levels of physical activity, leading to higher rates of obesity (Roholt, Johnston-Goodstar, & Eubanks, 2016). Compared to the general population, AI/AN populations also experience increased rates of certain cancers and diabetes and inequalities in the number of and access to services (National Indian Council of Aging, n.d.). Common barriers to services identified by AI/AN populations include language and communication barriers, discrimination, physical distance to services, and a lack of coverage (National Indian Council of Aging, n.d.). Lastly, disparities in stereotyping/racism can have long-lasting effects on youth (Roholt, Johnston-Goodstar, & Eubanks, 2016). Microagressions—persistent and commonly cited forms of day-to-day racism faced by AI/AN youth—have been found to increase distress in the short- and long-term and may have a more significant impact than single or periodic instances of racism (Evans-Campbell, 2008).

Urban and Rural Communities

Many studies on ACEs may not be generalizable to low-income, racially diverse, urban populations because most studies have been geared toward suburban and rural white, middle- and upper-class youth (Wade et al., 2014). A study by Wade and colleagues is one of a limited number of studies with the purpose of understanding ACEs in inner-city, racially diverse, urban youth populations (2014). How ACEs impact this population is particularly significant because urban youth experience poverty in addition to abuse, maltreatment, exposure to violence, and discrimination in socially, financially, and racially disadvantaged communities. Wade and colleagues argue for a more comprehensive inclusion

of ACEs into research as the current understanding of ACEs is insufficient to recognizing the diverse adverse experiences urban youth face.

A National Institutes of Health (NIH) (2011) study examined the impact of ACEs on a low-income, urban youth population in San Francisco. The NIH study identified nine ACEs of interest: (1) physical abuse; (2) emotional abuse; (3) sexual abuse; (4) household alcohol and/or drug abuse; (5) incarcerated household member; (6) chronically depressed, mentally ill, institutionalized, or suicidal household member; (7) mother treated violently; (8) one or no parents; and (9) emotional or physical neglect. NIH found evidence that children exposed to four or more ACEs had a 51 percent prevalence rate of learning/behavior problems compared to children with three or less ACEs and a 3 percent prevalence rate of learning/behavior problems (Burke et al., 2011). This study suggests that ACEs can have a cumulative and/or multiplicative impact for youth.

Urban and rural populations are more likely to experience poverty than suburban populations. Similar to urban communities, research has not yet focused on rural communities and their relationship to ACEs and social determinants of health; however, poverty correlates with poor health outcomes and higher mortality rates in these populations (Blumenthal & Kagen, 2002). This is significant, considering a lower socioeconomic status correlates with problems in health, diet, and living situations and increases the likelihood to participate in risky behavior (Abbott & Williams, 2015). Poverty during childhood can have long-lasting effects, as an adult who experiences poverty as a child is more likely to experience poverty as an adult. This is especially true for African Americans who experiences childhood poverty and have a higher risk for experiencing poverty than non-African Americans (Wagmiller & Adelman, 2009). Furthermore, health disparities in rural communities can be more significant, depending on individual demographics, including one's financial status, educational status, and social capital (Abbott & Williams, 2015). In comparison to urban communities, rural communities have fewer health care professionals and hospital beds per capita and face barriers in transportation to access health care. A lack of resources in rural communities, coupled with detrimental social determinants of health, can produce a difficult environment for youth to grow up in and may have long-lasting effects into adulthood. Substance use, including opioid addiction, in rural communities is more prevalent because rural communities are less likely to have an effective infrastructure for mental health and substance use services, coordinated resources, and a lack of physicians who can provide substance use services like Medication Assisted Treatment (Hancock et al., 2017). However, health care services are not equally distributed in urban areas, and low-income urban populations may not necessarily have access to health care (Blumenthal & Kagen, 2002). Rural communities are susceptible to high poverty levels, leading to difficulties in obtaining an appropriate diet, sufficient shelter, and/or obtaining medical care. Lastly, urban youth are likely to be exposed to community violence with 85 percent of urban adolescents reporting exposure to violence in their community and 69 percent experiencing violence themselves. As a result of exposure to violence in the community and to self, urban youth can experience an array of mental health challenges, including depression, anxiety, PTSD, and aggression (McDonald & Richmond, 2008).

IMPLICATIONS FOR THE ANTI-TRAFFICKING FIELD

Research strongly suggests that some youth populations experience an increased likelihood of ACEs and social determinants of health inequalities. Identifying and providing services to youth with these experiences may improve their physical, emotional, and psychological well-being from childhood into adulthood. This is particularly significant for individuals at risk of trafficking.

Exposure to ACEs and social determinants of health inequalities increases an individual's likelihood for mental health and physical concerns as well as an individual's risk of trafficking. Some youth have

limited access to appropriate mental health services at crucial developmental stages and are less likely to develop proper coping mechanisms (Garcia et al., 2015) and executive functioning that can impair day-to-day functioning and self-regulation, problem-solving, and decision-making skills (Danese, DeBellis, & Teicher, 2015; U.S. Department of Health and Human Services, 2017), which can have longstanding impacts throughout adulthood. Some ACE outcomes may increase a youth's risk of being trafficked. Risk factors associated with trafficking are similar to ACEs discussed in previous sections, including poverty and/or other financial difficulties, lack of education, mental health and physical conditions, abuse, neglect, exposure to violence, substance use, gang participation, partaking in risky sexual behaviors, and being a runaway (Reid et al., 2016). Poverty can increase the risk of trafficking as traffickers seek out individuals who need support and seize the opportunity to exploit them (Perry & McEwing, 2013). This is especially true as some youth with a history of ACEs (e.g., foster youth) may have difficulty in forming and maintaining positive relationships with other youth and adults (Bruskas & Tessin, 2013). Therefore, with a history of emotional abuse and/or neglect, some youth may seek feelings of approval and belonging from others, increasing their susceptibility to tactics employed by traffickers (Reid et al., 2016). Additionally, runaway and homeless youth have an increased likelihood of trafficking because of a lack of food, shelter, and/or money (McClain & Garrity, 2011), with one study finding that 20 percent of homeless youth experienced labor or sex trafficking (Murphy, 2016). This is especially concerning for LGBTQ youth who comprise an estimated 20 to 40 percent of homeless youth (McClain & Garrity, 2011) and frequently report participating in survival sex as a means to obtain their basic necessities (Dank et al., 2015).

Reid and colleagues conducted a study of 913 juveniles arrested in Florida and with trafficking abuse reports from the Florida child abuse hotline. While juveniles are at high risk of ACEs and maltreatment, juveniles who have experienced trafficking are more likely to have a history of ACEs, including emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, and family violence. As such, this population has a higher incidence of ACEs than juveniles with nontrafficking backgrounds, indicating that juveniles who have experienced trafficking have a substantially higher number of ACEs and maltreatment than the general population. Furthermore, one of the most significant findings of the study was the influence of childhood sexual abuse on a child's risk of exploitation, with sexual abuse described as a "gateway" trauma leading to various forms of exploitation. This trend was true for both girls and boys. Sexual abuse, neglect, and exposure to family violence were particularly predictive of trafficking for girls, while sexual abuse and emotional abuse were predictive of trafficking for boys (Reid et al., 2016).

Scholars have found that a high percentage of individuals who have been trafficked report childhood abuse (sexual, physical, and emotional) (Abas et al., 2013; Servin et al., 2015; Zimmerman et al., 2006). Additionally, individuals trafficked in their youth were more likely to report a history of poly-victimization, including physical, sexual, verbal, and psychological abuse, in addition to witnessing violence, experiencing early loss, caregiver impairment, and economic pressure (Hopper, 2017). Youth report entering into prostitution as a means to escape abusive homes and to reinsert power over their lives because they viewed prostitution as a "normalized" economic opportunity (Cobbina & Oselin, 2011). Other studies have found that caregiver strain, such as substance use or domestic abuse, correlates with child maltreatment. Increased child maltreatment correlates with a likelihood for a child running away, substance use, and "higher levels of denigration of sexual self and others," which in turn predicted the likelihood of exploitation (Reid, 2011).

In general, individuals who have been trafficked face various social determinants of health inequities that impact their overall health and physical well-being. They are more susceptible to developing a sexually transmitted disease/sexually transmitted infection or HIV or AIDs, and they are less likely to have regular reproductive health care, will have limited access to condoms/birth control, and will

experience the physical effects of forced sexual acts and behaviors such as back pain and stress injuries (Perry & McEwing, 2013).

PREVENTION AND RESILIENCY

Exposure to ACEs and social determinants of health inequalities can have a detrimental and lasting impact on individuals, families and the community. As such, efforts to prevent or mitigate ACEs and social determinants of health inequalities are essential. Prevention and resiliency building efforts range from outreach campaigns educating the community on the risks of trafficking to providing parents with education and resources for healthy child rearing. In the CDC's 2014 *Essentials for Childhood: Steps to Create Safe, Stable, Nurturing Relationships and Environments*, the authors argue safe, stable and nurturing caregivers and environments can promote resiliency in youth. Such environments include a lack of physical and psychological harm, consistency in social, emotional and physical environments and presence of a nurturing parent/caregiver with the capability to act with sensitivity and consistency, whilst meeting the needs of the child. In the presence of safe, stable and nurturing environments children may experience fewer instances of ACEs and when present, can mitigate the negative impacts of past ACEs. As such, these factors can have the potential to impact an individual's physical, psychological, and emotional outcomes while reducing health disparities (U.S. Department of Health and Human Services, 2014).

Risk factors for the ACE of child abuse include parental immaturity, unrealistic expectations, stress, parental substance use, intergenerational trauma and lack of parental support. The presence of these circumstances alone does not mean a child will experience ACEs, but as the number of factors increase an individual's risk will increase for child abuse (U.S. Department of Health and Human Services, 2016a). As such, education and prevention efforts promoting safe and healthy families is one area in which individuals and communities can work to reduce the risk for adverse childhood experiences. Recognizing the correlation between ACEs and risk of trafficking, prevention efforts could include outreach and education to inform individuals and the community of the risks for trafficking and to provide information to mitigate that risk.

For example, the *Combatting Trafficking: Native Youth Toolkit on Human Trafficking* published by the U.S. Department of Health and Human Services includes six tips for protection against trafficking. Maintaining safe social media habits, limiting personal information available on the Internet, encouraging healthy relationships, promoting self-esteem and learning about tribal heritage and culture are a handful of tips provided to youth to decrease their risk for trafficking (U.S. Department of Health and Human Services, n.d.). These prevention efforts extend beyond AI/AN youth as shown by Arizona State University's Office of Sex Trafficking Intervention Research's publication "Teen Sex Trafficking." The publication provides 10 ways teens can protect themselves from being trafficked including maintaining safe social media habits, maintaining relationships with family and friends, staying in school and not becoming dependent on drugs or alcohol. Other tips include not running away, not providing sexual favors or accepting expensive gifts and asking for help if the teen feels depressed or angry (Arizona State University, n.d.).

Promoting resiliency in children can also be undertaken using a two-generation model, an approach that prioritizes improved outcomes for children by addressing the needs of children and their parents/caregivers simultaneously. By strengthening the ability of caregivers and providing them resources, caregivers are better equipped to meet the needs of children and prevent intergenerational disparities. By understanding their own history of adverse experiences, caregivers can be aware of intergenerational trauma and work to prevent disparities passing down to their children (Shonkoff & Fisher, 2013).

Other trauma-centered approaches to improving the outcomes of youth include trauma-informed foster care approaches. Guides such as the Ohio Trauma Consortium's *Adoptive and Foster Family Support Guide* is an example of how foster care and adoption families can understand the effects of trauma and be better prepared to meet the needs of the children they care for (Schooler & Bagley, 2013).

The guide identifies nine essential trauma-informed skills for families to learn and do:

1. Understand the impact of trauma.
2. Maximize a child's sense of safety.
3. Help children manage overwhelming emotions.
4. Help children manage overwhelming behaviors.
5. Respect and support children's positive relationships.
6. Help a child understand his/her life story.
7. Advocate for services.
8. Support trauma-focused assessment and treatment.
9. Understand the importance of self-care (Schooler & Bagley, 2013).

Protective Factors for Youth in and Aging Out of Foster Care

Individual Level

- **Self-regulation skills**
- **Relational skills**
- **Academic skills**

Relationship Level

- **Parenting competencies**
- **Caring adults**
- **Living with family member(s)**

Community Level

- **Positive school environment**
- **Stable living situation**
- **Support for independent living**

By understanding the effects of adverse experiences and providing trauma-informed services, youth are better supported and equipped to overcome such experiences. Beyond parents and caregivers, service providers and professionals play a critical and positive role in building resiliency and promoting self-efficacy in youth with a history of ACEs by using a person-centered, trauma-informed approach that takes into account how trauma can negatively affect executive functioning, including impulse control, attitudes, and behaviors. Trauma-informed care programs take into consideration the impact of adverse experiences and use this knowledge to create action-oriented programs that build the capacity of their clients in the realms of self-regulation and self-care. The core components of trauma-informed care include (1) taking into consideration the widespread impact of trauma; (2) identifying a history of trauma in clients; (3) integrating informed policies, practices, and programs; and (4) minimizing re-traumatization (Leitch, 2017).

Education and prevention efforts frequently extend beyond at-risk youth and parents/caregivers to community members by providing information on the issue and suggestions to combat trafficking in communities. In Arizona State University's Office of Sex Trafficking Intervention Research's publication "Teen Sex Trafficking," community members are encouraged to inform tribal leaders of the issue, start school coalitions, use social media to spread awareness in their community, and/or to strengthen youth in their community (U.S. Department of Health and Human Services, n.d.). Resources and guides to protect communities from child maltreatment and youth trafficking not only include education on trafficking, but information on how to increase youth resiliency and equip youth with the knowledge, skills and psychological/emotional strength to limit the effects of ACEs.

Understanding and promoting the protective factors in youth is one means to diminish an individual's risk for maltreatment and trafficking. The Minnesota Department of Health identifies numerous protective factors for youth including:

- Youth maintaining close relationships with competent caregivers or other adults and mainitaing positive social relationships with others

- Parent/caregiver factors including resiliency, the use of positive parenting skills and parental support and cummunity and social systems
- Youth maintaing a sense of purpose (i.e., through faith, culture, identity)
- Presence of developmentally appropraite skills (i.e., the ability to problem solve or self–regulate/cope) and youth maintaining social and emotional health (Michigan Department of Health, n.d.)

The Child Welfare Information Gateway (2015) also identified specific protective factors for youth in or aging out of the foster care system. Organized at the individual, relationship and community levels, these factors mirror protective factors identified by the Minnesota Department of Health, but are adapted to the unique experience foster youth may experience, such as placement instability (Child Welfare Information Gateway, 2015). By understanding the risks of trafficking and how protective factors encourage youth resiliency, programming can be built based on a communities needs to improve protective factors at the individual/youth level, parental level, and community level.

CONCLUSION

Children in and aging out of foster care, runaway/homeless youth, UAC, AI/AN youth, and urban and rural youth have a substantially higher likelihood of being exposed to ACEs and social determinants of health inequalities as compared to the general population. Trafficking risk factors parallel common ACEs found in the three populations and indicate an area of concern for these populations. Youth who experience shelter insecurity, such as those who run away or are thrown away, and youth aging out of the foster care system may be at risk of sexual exploitation as they attempt to secure housing, food, and clothing. Youth with a history of emotional abuse and neglect may be inclined to run away and seek approval and belonging from others, thereby increasing their risk of being preyed on by gangs, predators, and traffickers (Reid et al., 2016). Because sexual abuse has been identified as a “gateway” trauma that leads to forms of exploitation, sexual abuse and trauma in AI/AN populations is also of particular concern. Lastly, poverty experienced by urban and rural youth are additional areas of concern. Proper screening/identification and subsequent services may help lessen the risk of youth in these populations. Promoting resiliency and protective factors through trauma-informed care and supporting safe, stable, and nurturing environments can combat the detrimental effects of ACEs and social determinants of health inequalities on youth. As such, recognizing the unique experiences of youth and trajectories of functioning as youth transition from childhood to adulthood will be necessary to improve outcomes and reduce a youth’s risk of trafficking.

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Zimmerman, C., Hossain, M., Yun, K., Roche, B., Morison, L., & Watts, C. (2006). Stolen smiles: A summary report on the physical and psychological health consequences of women and adolescents trafficked in Europe. London: The London School of Hygiene & Tropical Medicine. Retrieved from https://www.choa.org/~/media/files/Childrens/medical-professionals/physician-resources/cpc/stolen-smiles.pdf

ANNOTATED BIBLIOGRAPHY

The results of this annotated bibliography are based on a search in multiple databases from Marymount University's Library database. These databases included Marymount University's Library database (MU Summon), Academic Search Complete, ProQuest Research Library, and Google search. The key words included *adverse childhood experiences*, *social determinants of health*, *foster care youth*, *youth aging out of foster care, homeless youth, runaway youth, unaccompanied alien children, American Indian and Alaska Native (AI/AN) youth*, *rural and urban youth*, *child/youth labor trafficking in the United States*, *child/youth sex trafficking in the United States, resiliency, and protective factors*. Articles are summarized here if they were published in peer-reviewed journals between 2003 and 2017. Using this criteria, 33 articles are summarized.

Abas, M., Ostrovschi, N. V., Prince, M., Gorceag, V. I., Trigub, C., & Oram, S. (2013). Risk factors for mental disorders in women survivors of human trafficking: A historical cohort study. *BMC Psychiatry, 13*(204), 1–11. Retrieved from https://bmcpsychiatry.biomedcentral.com/articles/10.1186/1471-244X-13-204

The purpose of this study was to determine the risk factors for mental health disorders of women who have been trafficked. The study was interested in three factors influencing the risk of a diagnosable mental health condition following trafficking: a history of abuse prior to being trafficked, social stressors, and support systems following trafficking. The researchers conducted interviews with 120 women older than age 18 who had been trafficked within the last year and who were registered with the International Organization for Migration. Women took a self-assessment to determine childhood abuse, and a psychiatrist interviewed women 2–12 months after their return to Moldova using the Structured Clinical Review for DSM-IV Axis I Disorders. Social stressors were measured using a modified version of the Camberwell Assessment of Need Short Appraisal Schedule, and social support was measured using the Duke Functional Social Support Questionnaire. Of the sample, 79 percent of women reported childhood abuse (31 percent sexual abuse, 66 percent physical abuse, and 72 percent emotional abuse). More than 54 percent of the women had a diagnosable mental health condition, including PTSD, depression, or an anxiety disorder. The study found that sexual abuse, longer duration of trafficking, social stressors, and low social support were correlated with and increased the risk of a diagnosable mental health disorder. With the prevalence of mental health disorders following trafficking, childhood trauma and posttrauma stressors, the authors assert that service providers to women after trafficking should be aware of an individual's history of ACEs, in addition to the trauma they experienced during trafficking and subsequent stressors.

Abbot, L. S., & Williams, C. L. (2015). Influences of social determinants of health on African Americans living with HIV in the rural southeast: A qualitative meta-synthesis. *Journal of the Association of Nurses in Aids Care, 26*(4), 340–356. Retrieved from http://dx.doi.org/10.1016/j.jana.2015.03.004

This qualitative metasynthesis study analyzed previous literature on the social determinants of health of African American individuals, specifically with those living with HIV. These researchers defined their definition of social determinants of health as "…the living and social conditions where people are born, live, work, and play that are influenced by political and economic systems, including allocation of resources, health care access, and distribution of power." This synthesis focused primarily on rural communities because these individuals face many challenges, compared to nonrural communities. The measures analyzed included poverty, unemployment, missing work, lack of transportation, stress in daily living, social exclusion/isolation, lack of social support, lack of health care, and substance use. The significant social determinants of health include poverty and stress with daily living. Poverty is an

extremely significant social determinant to understand for rural communities given that this feeds into whether they are homeless, have access to health care, and/or can provide food for themselves or their families. Additionally, feeling socially excluded and needing social support was frequently listed. While this research focused mainly on the social determinants of health for rural African American men with HIV, poverty, lack of adequate health care, stress with daily living, unemployment, and lack of transportation are all social determinants of health that could be applied to any number of rural communities.

Baiden, P., Stewart, S. L., & Fallon, B. (2017). The role of adverse childhood experiences as determinants of non-suicidal self-injury among children and adolescents referred to community and inpatient mental health settings. *Child Abuse & Neglect, 69,* 163–176. Retrieved from http://dx.doi.org/10.1016/j.chiabu.2017.04.011

Researchers used the interRAI Child and Youth Mental Health Assessment tool to see the effect of ACEs on nonsuicidal self-injury (NSSI) occurrences. The reason they used this tool is because it screens for "… approximately 400 clinical elements covering various behavioral and mental state indicators, stress and trauma, child maltreatment history, strength and resilience, social support, substance use, medication history, DSM-IV diagnosistic information, cognitive and executive functioning, health, nutritional status, and a number of scales that can be used for outcome measurement, as well as care planning protocols that can be used to identify areas of imminent concern or risk." This study took place among a sample of 2,038 children from Ontario, Canada, mental health agency databases. Of this sample, 29 percent had engaged in NSSI previously. Three different variables were measured: the outcome variable (history of NSSI and intent); the explanatory variable (history of abuse, neglect, viewing violence, and addiction/abuse in the home); and the control variable (age, foster care history, gender, etc.). Regarding the findings, the researchers found that 79.1 percent of this 29 percent that had engaged in NSSI had a support system. They also found that 26.5 percent and 26.6 percent of this sample of NSSI children had been emotionally abused and had seen violence in the home, respectively. Of this 29 percent, "…19.7 percent had parents with addiction or substance abuse issues, 17.6 percent had a history of neglect, 16.1 percent were physically abused, and 8.1 percent were sexually abused." These findings indicate that ACEs are related to a history of NSSI. This study helps to corroborate previous studies that have resulted in similar findings.

Benoit-Bryan, J. (2011). The runaway youth longitudinal study. National Runaway Switchboard. Retrieved from https://www.1800runaway.org/wp-content/uploads/2015/05/NRS-Longitudinal-study-full-report.pdf

Data from the from the National Longitudinal Study of Adolescent Health (Add Health) were used to track participants who were in grades 7–12 during the 1994–1995 school year over 15 years and into adulthood. The purpose of this study was to identify behaviors and characteristics in childhood that had an impact on the individual's health, education, and economics as adults. Of particular concern was the impact of running away as an adolescent. The author found that running away had impacts in three primary realms: health, economics, and justice system involvement. Because running away was found to have significant impacts—including an increased likelihood of suicidal ideation, decreased wages, and increased justice involvement (i.e., more likely to be arrested)—understanding the factors leading to running away is important to mitigate the negative outcomes resulting from youth leaving home.

Bender, K., Yang, J., Ferguson, K., & Thompson, S. J. (2015). Experiences and needs of homeless youth with a history of foster care. *Children and Youth Services Review, 55*. Retrieved from https://www.researchgate.net/profile/Jessica_Yang9/publication/279865143_Exper

iences_and_needs_of_homeless_youth_with_a_history_of_foster_care/links/5a1eb1fb0f7e9b9d5e000a56/Experiences-and-needs-of-homeless-youth-with-a-history-of-foster-care.pdf

The authors of this study identified the experiences and needs of former foster youth who experienced homelessness. By interviewing 601 homeless youth in Denver, Austin, and Los Angeles, the study found that more than 33 percent of homeless youth were in foster care at some point. Individuals who had been in foster care experienced precarious (nonpermanent) housing and had needs in education, employment, and mental health and substance use assistance. Foster youth were more likely to have experienced great maltreatment and extended durations of homelessness. While current interventions and programming exists for former foster youth in obtaining housing stability, further research is needed to make such interventions better and to increase positive outcomes for homeless youth.

Braciszewski, J. M., & Colby, S. M. (2015). Tobacco use among foster youth: Evidence of health disparities. *Child Youth Services Review, 58,* 142–145. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4604603/

In the 2005 National Study on Child and Adolescent Well Being, a study completed by the U.S. Department of Health and Human Services, researchers found that of children in foster care or a group home, 48 percent were lifetime cigarette smokers and 37 percent were smoking when the study was completed. The purpose of this study was to expand on data from previous research to determine whether children in foster care had a higher prevalence of smoking cigarettes. This study is significant due to the known health deficiencies that smoking causes, which could show that children in foster care may have worse health if they continue to smoke. The sample consisted of 116 youth who had previously been in foster care. The measure used was the Alcohol, Smoking and Substance Involvement Screening Test in order to test for additional substance use besides tobacco. Researchers found 62 percent of the sample are lifetime tobacco users. Of the 46 percent who said they had recently smoked, 70 percent were daily or nearly daily smokers. This study also showed a large percentage of youth previously in foster care smoked tobacco and used other substances, including alcohol and marijuana. The difference between those who were not tobacco users and those who were, in relation to other substances, was quite drastic. Of the 46 percent who recently used tobacco, 70 percent also consumed alcohol whereas the percentage for those who do not consume alcohol was 40 percent. Seventy-two percent of the recent tobacco users also participated in marijuana usage (compared to 25 percent of those who did not smoke tobacco). However, 89 percent of the 72 percent who smoked marijuana and tobacco were found to have Marijuana Use Disorder, and 26 percent smoked tobacco and marijuana daily. These findings show (1) a relationship between youth in foster care and the ingestion of a tobacco product, (2) that this increases the likelihood they will take part in alcohol use, and (3) that an alarming rate will be diagnosed with Marijuana Use Disorder.

Brockie, T. N., Dana-Sacco, G., Wallen, G. R., Wilcox, H. C., & Campbell, J. C. (2015). The relationship of adverse childhood experiences to PTSD, depression, poly-drug use and suicide attempt in reservation-based Native American adolescents and young adults. *American Journal of Community Psychology, 55,* 411–421. Retrieved from https://www.researchgate.net/profile/Teresa_Brockie/publication/275216991_The_Relationship_of_Adverse_Childhood_Experiences_to_PTSD_Depression_Poly-Drug_Use_and_Suicide_Attempt_in_Reservation-Based_Native_American_Adolescents_and_Young_Adults/links/553f74c30cf2574dcf628d45/The-Relationship-of-Adverse-Childhood-Experiences-to-PTSD-

Depression-Poly-Drug-Use-and-Suicide-Attempt-in-Reservation-Based-Native-American-Adolescents-and-Young-Adults.pdf

The primary aim of this study was to see if and what type of a relationship existed between ACEs and the outcome of various behaviors and mental illnesses among American Indian individuals. This sample consisted of 255 tribal members between ages 15 and 24. The ACEs chosen came from the Centers for Disease Control and Prevention/Kaiser Permanente Study. These include "…physical abuse, emotional abuse, sexual abuse, emotional neglect, physical neglect, and witnessing violence against [the] mother." The current researchers added both discrimination and historical loss symptoms to be measured ACEs. The two mental health outcomes they presented were depression and PTSD. The two risk behaviors the current study presented were poly-drug use and suicide attempts (p. 414). The research found that emotional abuse was the most commonly cited ACE, and sexual abuse was the least commonly cited among this sample population. More than two-thirds of the sample (78 percent) had experienced at least one ACE, more than half (58.6 percent) reported experiencing at least two, and 4 percent experienced all six of the ACEs measured. Analyzing the risk behaviors and mental illnesses among this population, "…21 percent had depression symptoms, 54 percent were classified as a poly-drug user, 21 percent had PTSD symptoms, and 30 percent reported a lifetime suicide attempt." The overall findings from this data indicate a relationship between the number and type of ACEs and participation in risk behaviors or having a mental illness.

Bruskas, D., & Tessin, D. H. (2013). Adverse childhood experiences and psychosocial well-being of women who were in foster care as children. *Nursing Research & Practice, 17* (3), e131–141. Retrieved from http://dx.doi.org/10.7812/TPP/12-121

In this study, researchers analyzed the number of ACEs of women who had previously been in the foster care system. The purpose of the study was to analyze how the ACEs affected their adult well-being and how experiencing the ACEs before or during the system could have affected them. They used a sample of 101 women who were children in the foster care system. The researchers reviewed five characteristics of the foster care system, including "age at foster care entry, number of years in foster care, number of foster care placements, number of school transfers, and type of foster care placement." Questionnaires included the Adverse Childhood Experiences Questionnaire, the Sense of Coherence Questionnaire, and the General Health Questionnaire. A prominent finding from this sample was "…as the number of foster care placements increased, the number of ACEs also increased." This finding is significant because the sample yielded a result of an average of six different placements during the time the women were in the system. This same finding came up when viewing the psychological distress of the adult women; the more ACEs, the more psychological distress they were privy to. This is significant considering that 56 percent of the women were currently experiencing this distress. The average number of ACEs reported by this sample was approximately 5.68. In regard to the researchers question about the number of ACEs experienced before or after foster care, the study resulted in "…a greater proportion of respondents report[ing] higher rates of ACEs occurring before care…compared with during foster care." When abuse was analyzed, this study found that psychological neglect, intimidation, physical abuse, and physical neglect were the most common (in this order); however, "…abuse associated with physical neglect and abuse associated with living in a dysfunctional household were more frequent before foster care."

Burke, N. J., Hellman, J. L., Scott, B. G., Weems, C. F., & Carrion, V. G. (2011). The impact of adverse childhood experiences on an urban pediatric population. *Child Abuse & Neglect, 35*(6). Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3119733/

In this study, researchers sought to understand ACEs in low-income, urban communities. The study looked at the prevalence of ACEs through the retrospective chart review of 701 participants from the

Bayview Child Health Center in San Francisco. Researchers identified relationships between ACEs with learning/behavior problems and body mass index (BMI)/obesity. The authors used nine categories to determine individual ACE scores, including: "(1) recurrent physical abuse; (2) recurrent emotional abuse; (3) contact sexual abuse; (4) an alcohol and/or drug abuser in the house; (5) an incarcerated household member; (6) someone who is chronically depressed, mentally ill, institutionalized, or suicidal; (7) mother treated violently; (8) one or no parents; and (9) emotional or physical neglect." Learning/behavior problems and overweight/obesity measures were determined through use of pediatric medical charts. The authors found that 67 percent of participants reported 1 or more ACEs, and 12 percent reported 4 or more ACEs. There was a correlation between 4 or more ACEs and increased risk of learning/behavior problems and obesity; 51 percent of participants with 4 or more ACEs met the criteria for a learning/behavior problem, and 45 percent of participants with 4 or more ACEs were classified as overweight/obese (BMI ≥ 85 percent).

Cobbina, J. E., & Oselin, S. S. (2011). It's not only for the money: An analysis of adolescent versus adult entry into street prostitution. *Sociological Inquiry, 81*(3), 310-332. Retrieved from http://presleycenter.ucr.edu/publications/its_not_only.pdf

The authors examined how age influences a woman's entry into and exit out of prostitution. The study was based on interviews with 40 female prostitutes in five U.S. cities initially conducted during previous studies. The purpose of the study was to understand the differences in entry between adolescents (18 and under) and adults (19 and up) and whether age influences how long women work as prostitutes, and how the length of stay affected them. The study found that women who entered prostitution as an adolescent worked longer than women who entered prostitution as an adult, 22 years and 8 years, respectively. Adolescents in the study reported joining prostitution as a means to flee abuse and to reclaim power or control over their lives and/or viewed prostitution as a "normalized" economic opportunity. In comparison, women who entered prostitution as an adult reported entry as a means to sustain a drug addiction or for survival. The length of time as a prostitute was also associated with increased levels of abuse, overall exhaustion, and stigmatization. The authors argued that by understanding the different patterns of entry into prostitution based on age, prevention and intervention programs can be tailored to reflect the needs of those individuals best.

De Ravello, L., Abeita, J., & Brown, P. (2008). Breaking the cycle/mending the hoop: Adverse childhood experiences among incarcerated American Indian/Alaska Native women in New Mexico. *Health Care for Women International, 29*(3), 300–315. Retrieved from https://www.tandfonline.com/doi/abs/10.1080/07399330701738366

This study was concerned with incarcerated American Indian/Alaska Native (AI/AN) women with a history of ACEs and their subsequent physical, emotional, and social outcomes as adults. The study included a 217-item survey that included questions on women's backgrounds, demographics, health, criminal justice history, and lives before and during incarceration. Participants included 36 women from the New Mexico Women's Correctional Facility. Researchers modified the original ACE scale to include five rather than seven scales/experiences, including "physical neglect, dysfunctional family member, violence witnessed in the home, physical abuse by a family member or loved one, and sexual abuse by a family member or loved one." One participant did not have a history of ACEs, but 81 percent of respondents reported two or more ACEs with high rates of an immediate family member having an alcohol or drug problem, witnessing household violence, having an incarcerated immediate family member, or being sexually or physically abused by a family member or loved one. Measured outcomes included alcohol and drug abuse, mental health, partner violence, and criminal history. Researchers identified a correlation between ACE scores and criminal justice history (violent offenses), lifetime suicide attempt(s), and intimate partner

violence. The authors argue that women and AI/AN experience poor health outcomes overall and that gaps in services can be particularly detrimental to this population.

Estefan, L. F., Ports, K. A., & Hipp, T. (2017). Unaccompanied children migrating from Central America: Public health implications for violence prevention and intervention. *Current Trauma Reports, 3*(2). Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5812021/pdf/nihms917160.pdf

The purpose of this literature was to explore the varied risk factors UACs face and the implications of violence and trauma on youth's development into adulthood. UACs face significant violence and trauma in their countries of origin, which can have severe consequences. Overall, there is a lack of research on ACEs for UACs originating from Central America, though the literature on ACEs for other populations can provide some insight. Prevention and intervention is particularly important, though no current programs target UACs specifically. As such, the review concludes by providing recommendations for adapting interventions to meet the needs of UACs who have significant trauma and violence histories prior to migrating to the United States.

Garcia, A. R., O'Brien, K., Kim, M., Pecora, P. J., Harachi, T., & Aisenberg, E. (2015). Adverse childhood experiences and poor mental health outcomes among racially diverse foster care alumni: Impact of perceived agency helpfulness. *Journal of Child and Family Studies, 24,* 3293–3305. Retrieved from https://link.springer.com/article/10.1007/s10826-015-0132-8

Researchers wanted to look for two main questions in this study comparing ACEs to the mental health of individuals previously in foster care. The first question was "Do a subset of the ACEs, placement instability, and childhood disability increase the likelihood of diagnosis with a psychiatric disorder among Latino, African American, and Caucasian foster care alumni, controlling for gender and age at the time interviewed?" The second question researchers wanted to analyze was "Do foster care alumni's perceptions of agency helpfulness mediate the relationship between exposure to ACEs and poor mental health outcomes among a racially/ethnically diverse pool of these alumni?" The sample population consisted of a total of 1,068 Latino, African American, and Caucasian individuals. The first measure applied to the placement of the individual while they were in foster care. They refer to this as "placement instability" and look to see the length of time they were in foster care and how many different placements they endured. The second measure was about the abuse, if any, that they endured while in foster care. The third measure was the functioning of their birth family (not the family they were in foster care with); however, the researchers documented any mental illnesses or other disabilities in this section. The final measure was the perceived agency helpfulness, which analyzed the quantity and quality of aid given to them by foster care staff (e.g., did they help them continue their education, find a job, housing, etc.). Researchers found five significant findings. The first is that if there were significant placement instability results, regardless of the race of the individual, the percentage of developing a psychiatric disorder increased. The second finding was that researchers did not find a relationship between development of a psychiatric illness to any form of substance use/abuse and incarceration/criminal history of their parent. In the third finding, all ethnicities showed an increase in mental illness if they experienced a steady stream of abuse as a child in foster care. The fourth finding indicated that if these individuals had help and support from staff in the foster care system, they were less likely to develop mental illnesses. The final finding, when these individuals as children in foster care had to switch around living environments more often than their counterparts, was that they were less likely to believe foster care staff was there to support them. This increased their likelihood of developing a mental illness, similar to finding number one.

Hopper, E. K. (2017). Polyvictimization and developmental trauma adaptations in sex trafficked youth. *Journal of Child & Adolescent Trauma, 10*(2), 161–173. Retrieved from http://www.raymondbechard.com/wp-content/uploads/2017/04/Polyvictimization-and-Developmental-Trauma-Adaptations-in-Sex-Trafficking-of-Youth.pdf

The author of this study conducted a qualitative analysis of 32 individuals who had experienced minor sex trafficking. Based on chart reviews, the author identified 13 categories of childhood adversity, including abuse, violence, neglect, and displacement. The study found that 91 percent of the population reported a history of victimization, and more than 75 percent of the population experienced polyvictimization. Significant themes included physical and/or sexual abuse, verbal and psychological abuse, witnessing violence, and increased levels of developmental trauma, early loss, caregiver impairment, and financial stress or poverty. Additionally, 81 percent reported emotional and behavioral dysregulation prior to trafficking. While the sample population was affected by a small sample size and not representative of youth who have been sex trafficked as a whole, the study informs the field of the trajectories youth may take leading to sex trafficking. The paper concludes with recommendations for the field, including trauma-informed practices, offering culturally and linguistically appropriate services, and addressing concurrent needs.

Hurlburt, M., Leslie, L. K., Landsverk, J., Barth, R. P., Burns, B. J., Gibbons, R. D., & Zhang, J. (2004). Contextual predictors of mental health service use among children open to child welfare. *Archives of General Psychiatry 61*(12). Retrieved from https://jamanetwork.com/journals/jamapsychiatry/fullarticle/482103

The purpose of this study was to examine the efficiency of coordination between child welfare services and mental health agencies and patterns of use by children who have interacted with child welfare. Cases were taken from 97 U.S. counties, included 2,823 cases, and was concerned with children removed from their homes or children with active welfare case for abuse or neglect. The need for mental health services was identified through use of the Child Behavior Checklist. Those who scored at the clinical cutoff point were categorized as meeting a clinical level of need. While 42 percent of children met the criteria for requiring clinical help, only 28 percent obtained mental health services during the year of study. Mental health services included "(1) clinic-based specialty mental health services (e.g., community mental health clinics), (2) therapeutic nursery, (3) day treatment, and (4) private professionals, such as psychiatrists, psychologists, social workers, and psychiatric nurses." The authors found that better coordination resulted in better service outcomes—children were more likely to use services, and disparity between rates of use between white and African American children lessened. Racial and ethnic groups were less likely to receive services, but increased coordination between welfare services and mental health agencies could facilitate coordination and help agencies target populations less likely to receive necessary services.

Kenney, M. K., & Singh, G. K. (2016). Adverse childhood experiences among American Indian/Alaska Native Children: The 2011–2012 national survey of children's health. *Hindawi Publishing Corporation, Scientifica*, 1–14. Retrieved from http://dx.doi.org/10.1155/2016/7424239

The data in this study reflects parent reports about their children and the ACEs they have been exposed to. This study comprises 1,453 AI/AN children, with a 61,381 comparison group of children not of this ethnicity. The participants were selected using the 2011–2012 National Survey of Children's Health. Nine ACE measures were examined during the parent reports, including, "…(1) lived in a household with difficulty affording food or housing, (2) lived with a parent that had gotten divorced/separated, (3) lived

with a parent who died, (4) lived with a parent who served jail time, (5) seen parents hit, kick, slap, punch, or beat each other up, (6) been a victim of violence/witness to violence in [his/her] neighborhood, (7) lived with anyone who was mentally ill, suicidal, or severely depressed for more than a couple of weeks, (8) lived with anyone who had a problem with alcohol/drugs, and (9) been treated/judged unfairly based on race/ethnicity." The research also analyzed several demographic characteristics of the parents, birth of the child, and information about the geographic information. The most significant results found from this data include that AI/AN children were seven times more likely to be discriminated against or treated unfairly, "… 2–3 times more likely to have a parent who served time in jail…observed domestic violence…been a victim of violence/witnessed violence…lived with [a] substance abuser." These children were also "…1.5 times more likely to live in families with difficulty covering basics like food or housing…lived with divorced/separated parent…have lived with a parent who died." The data suggests that AI/AN children are "…more likely to have had 8 or 9 ACEs" and "…were more likely to have multiple ACEs."

Koss, M. P., Yuan, N. P., Dightman, D., Prince, R. J., Polacca, M., Sanderson, B., & Goldman, D. (2003). Adverse childhood exposures and alcohol dependence among seven Native American tribes. *American Journal of Preventive Medicine, 25*(3), 238–244. Retrieved from http://www.acesconnection.com/g/minnesota-aces-action/fileSendAction/fcType/5/fcOid/438296293967911063/fodoid/438296293967911062/Adverse_Childhood_Exposures_and_Alcohol_Dependence_Among_Seven_Native_American_Tribes%5B1%5D.pdf

This is the first study to compare the relationship between ACEs and alcohol dependence, specifically when analyzing the American Indian population. The researchers used a sample of 1,670 participants from seven different tribes for this study. To measure the effect of alcohol dependence, the Alcohol Use Disorders and Associated Disabilities Interview Schedule was utilized. Participants could respond to three possible responses for alcohol exposure: "(1) no parental alcoholism, (2) one or both parents with alcoholism, or (3) unknown." The Childhood Trauma Questionnaire helped gauge the childhood maltreatment the children were exposed to. These responses included "(1) physical abuse, (2) physical neglect, (3) sexual abuse, (4) emotional abuse, and (5) emotional neglect." Finally, the researchers asked three questions regarding their home placement as a child, which could be answered with "(1) boarding school placement, (2) foster care placement, and (3) adoption." Results of this study included "[m]ore than half of men and women reported having at least one parent with alcohol problems." This was broken down by category of abuse/neglect, with men and women experiencing physical neglect and abuse most often and emotional neglect the least often. Regarding the relationship between ACEs and alcohol dependence, this sample showed that any negative childhood exposure would increase the risk of women later becoming alcohol dependent. For men, this was more likely to occur if they experienced physical neglect and/or abuse and/or if their parents were also alcohol dependent. One of the more prominent numbers associated with this data is "…86 percent of participants experienced one or more categories of exposure, and 33 percent reported four or more categories." The significant finding from this data is that American Indian individuals who are exposed to negative experiences in their youth are more likely to become alcohol dependent.

McMillen, C. J., & Raghavan, R. (2009). Pediatric to adult mental health service use of young people leaving the foster care system. *Journal of Adolescent Health, 44*(1), 7–13. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2633876/

The purpose of this study was to understand and predict the rates of mental health service use for youth after leaving the foster care system. Researchers studied 325 19-year-olds from Missouri who had been in foster care at age 17. Utilizing the Service Assessment for Children and Adolescent measure and a

calendar of service history, participants were interviewed nine times over the course of the study. The study found of youth who obtained outpatient mental health specialty service, only 11 percent continued use during their transition out of the foster care system. Of youth who obtained psychotropic medications, only 19 percent continued medication use during their transition out of the foster care system. The authors found that the earlier youth leave the foster system, the more likely they are to discontinue mental health services. The primary reason participants reported was that they were able to make that decision and did not believe they needed services. Additionally, it was unlikely that youth would obtain outpatient mental health service when they left foster care and did not have Medicaid.

Murphy, L. T. (2016). Labor and sex trafficking among homeless youth. Loyola University. Retrieved from https://covenanthousestudy.org/landing/trafficking/docs/Loyola-Research-Results.pdf

The purpose of this study was to understand the experiences of homeless youth in 10 cities under Covenant House's care who faced labor and sexual exploitation. Interviews were conducted with 641 homeless youth who accessed services through Covenant House and were screened for sex and labor trafficking using the Human Trafficking Interview and Assessment Measure (HTIAM-14). The study found that 19 percent met the criteria for trafficking (14 percent sex trafficking, 8 percent labor trafficking, and 3 percent sex and labor trafficking). Overall, homeless youth had increased risk of trafficking due to poverty, lack of employment, a history of sexual abuse, and a history of mental health issues. The report provides various recommendations in the forms of prevention, outreach, confidential and inclusive identification, specialized interventions, and policy implications.

Newton, R. R., Litrownik, A. J., & Landsverk, J. A. (2000). Children and youth in foster care: Disentangling the relationship between problem behaviors and number of placements. *Child Abuse & Neglect 24*(10). Retrieved from https://www.researchgate.net/profile/Alan_Litrownik/publication/222324107_Children_and_youth_in_foster_care_Disentangling_the_relationship_between_problem_behaviors_and_number_of_placements/links/59e514c0458515250246f269/Children-and-youth-in-foster-care-Disentangling-the-relationship-between-problem-behaviors-and-number-of-placements.pdf

This study examined the relationship between placement instability and problem behaviors. The sample included 415 youth in foster care in San Diego who had been in foster care for a minimum of 5 months. Youth behavior was assessed using the Child Behavior Checklist and looked at internalizing and externalizing behavior in relation to the number of placement changes. In children displaying externalizing behavior initially, researchers found there was a strong prediction in increased number of placement changes. Of the 415 youth, 173 had not scored for behavioral problems at the beginning of the study; however, after facing multiple placement changes, there was an observable increase in behavioral problems as placement changes increased. Therefore, behavioral problems appear to influence and to be caused by changes in placement of youth in foster care. While initial externalizing behavior was a strong predictor of placement changes, children who enter the system with few behavior problems may not obtain the support they need as their number of placement changes increases. Identifying externalizing behavior may be easier for professionals who can then render services, but for children who internalize behavior problems services may not be as readily available. Therefore, it is important for providers to recognize the signs of internalizing and externalizing behavior and ensure that this population of children is not neglected.

Pecora, P. J., Kessler, R. C., William, J., O'Brien, K., Downs, A. C., English, D.,…& Holmes, K. (2005). Improving family foster care: Findings from the Northwest Foster Care Alumni Study. Casey Family Programs. Retrieved from http://www.casey.org/media/AlumniStudies_NW_Report_FR.pdf

Data from the Casey National Alumni Study was obtained from the records of 659 alumni, of which 479 were interviewed. Alumni ranged from ages 20–33 and were in foster care systems between 1988–1998 under Casey Family Programs, the Oregon Department of Human Services, or the Washington Department of Social and Health Services. Respondents were 61 percent women and 54 percent people of color. The purpose of the study was to identify the status of youth in foster care and their current status as an adult. While one-fifth of the sample population was determined to be well-functioning adults, the majority of respondents experienced setbacks in mental health, education, employment, and finances. Fifty-four percent of alumni met diagnostic criteria for at least one mental health condition in the past 12 months, and 20 percent presented co-morbidity for three or more mental health conditions. Alumni completed high school at a similar level to the general population (29 percent through a GED credential), but only 16 percent obtained a vocational degree and only 2 percent completed a bachelor's degree or higher. One third of the population met the poverty level or below, and more than 22 percent experienced homelessness after foster care. In summation, the authors gave policy and program recommendations, including increasing access to medical and mental health services, improving placement stability, increasing educational support/resources, and helping transition youth in foster care into adulthood.

Perry, K. M., & McEwing, L. (2013). How do social determinants affect human trafficking in Southeast Asia, and what can we do about it? A systematic review. *Health and Human Rights, 15*(2), 138–159. Retrieved from https://cdn2.sph.harvard.edu/wp-content/uploads/sites/13/2013/12/How-do-social-determinants-affect-human-trafficking-in-southeast-asia-and-what-can-we-do-about-it_-A-systematic-review-.pdf

This literature review analyzed the social determinants of health and the relationship to experiencing trafficking in Southeast Asia. To include all aspects of trafficking, researchers examined the act, the means, and the purpose that led to trafficking. Only women and children who had been trafficked were studied, and researchers identified nine significant countries where trafficking occurs frequently. Researchers analyzed 61 articles in which they were able to identify the most significant determinants found in this population. The list of social determinants (listed in order from highest amount of recognition in the literature to lowest) included poverty, gender, lack of policy and enforcement, formal education, age, ignorance of trafficking, migration, conflict and displacement, culture, demand, ethnicity, family dysfunction, border insecurity, globalization, domestic violence, caste status, marital status, virginity, citizenship and documentation, and maternal education. Poverty and gender had the highest number of articles that found these determinants to be significant in experiencing trafficking. A significant result they found included understanding which social determinants could be facilitating factors to experiencing trafficking and which were mitigating factors. They found that facilitating factors included poverty, gender, age and migration; mitigating factors included education and citizenship/documentation. The social determinants faced by women in Southeast Asia are contributing factors to experiencing trafficking in the future.

Rebbe, R., Nurius, P. S., Ahrens, K. R., & Courtney, M. E. (2017). Adverse childhood experiences among youth aging out of foster care: A latent class analysis. *Children and Youth Services Review, 74,* 108–116. Retrieved from http://dx.doi.org/10.1016/j.childyouth.2017.02.004

The main purposes of this study were to: (1) review ACEs that children in foster care are exposed to and how that effects the development of the child; (2) determine if sociodemographics change the type of ACEs that children in foster care are exposed to; and (3) examine the "…extent to which youth with distinct adversity profiles differed with respect to subsequent socio-economic, psychosocial, and criminal behavior outcomes that are consequential to successful transition into young adulthood and that may provide insights as to stress proliferation…as well as more evidence of psychosocial problems and criminological risk behaviors and outcome that would contribute to poorer health and functioning future outcomes." The sample comprised 732 males and females, starting when they were age 17 and measured until age 26. Three groups of ACEs were measured, including maltreatment (sexual abuse, physical abuse, neglect, and abandonment); household factors (substance use, mental illness, domestic violence, criminal records, five or more foster homes, and a failed adoption occurred); and environmentally based harm (seeing violence or death, natural disaster, serious injury, accident, or being in a physical assault or combat). Other measures considered included any criminal history or incarceration, socioeconomic means (do they have a degree, can they provide themselves with necessities, etc.), and mental health or subsequent substance use issues. The researchers grouped the participants into one of three classes: complex adversity (high on maltreatment and household), environmental adversity (high on environmental), and lower adversity (low on environmental, similar on other factors measured). The findings generated include a trend of polyvictimization. Each of these individuals experienced large amounts of ACEs but were grouped based on the amount of a certain measure they experienced. One significant finding is that "… youth who have experienced more complex ACEs histories experience homelessness at a substantially higher rate than those with less complex ACEs histories." Mental health and participation in substance use also increases with the more ACEs the individual is exposed to while they are in foster care. The most important finding is that the ACEs do create a polyvictimization effect as a child in foster care, leading to substantial problems when they grow into adults.

Reid, J. A. (2011). An exploratory model of girls' vulnerability to commercial sexual exploitation in prostitution. *Child Maltreatment, 16*(2), 146-157. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.820.3398&rep=rep1&type=pdf

The author theorized that caregiver strain influences child maltreatment—increased child maltreatment increases a child's likelihood of running away, substance use, and "higher levels of denigration of sexual self and others," and such factors would predict exploitation. By utilizing aspects of the General Strain Theory, the author interviewed 174 women regarding childhood experience. Women were selected based on hospital admission records for being sexually abused or from a comparable control group matched on "gender, race, age, and date of hospital visit." The study looked at caregiver strain (parental substance use, emotional or mental problems, or domestic abuse), child maltreatment (left home alone, did not have access to health care, were sexually abused, etc.), initial age of drug or alcohol use, running away and sexual denigration of self/others (measured by the individual's attitudes and opinions regarding sexual behavior), and prostituted as a minor. As caregiver strain increased, child maltreatment worsened, which was correlated with running away, underage substance use, and sexual denigration of self/others. The study found the latter variable to be most associated with the likelihood for childhood sexual exploitation.

Reid, J. A., Baglivio, M. T., Piquero, A. R., Greenwald, M. A., & Epps, N. (2016). Human trafficking of minors and childhood adversity in Florida. *American Journal of Public Health*, e1–e6. Retrieved from http://voicesforflorida.org/wp-content/uploads/2016/07/Reid-et-Al-Human-Trafficking-of-Minors-and-Childhood-Adversity-in-Florida.pdf

The purpose of this research was to examine the relationship between the number of ACEs a juvenile is exposed to and the likelihood of them experiencing trafficking. The data came from a previous sample of 68,218 juveniles in Florida, which was compared to a sample of 913 juveniles who are either thought to be experiencing trafficking or who are actually being trafficked. Researchers used arrest records and consulted the Florida Department of Juvenile Justice and the Florida Department of Children and Families to gather their sample. A few significant findings included that most youth with a trafficking report on file had ACEs associated with abuse, neglect, or family violence. Additionally, differences were found when comparing female victims versus male victims. For young girls, sexual abuse, emotional neglect, physical neglect, and family violence were found to be indicative of being trafficked. For the young males, researchers found that sexual and emotional abuse created a higher likelihood of being trafficked. The overall finding from this study was that juveniles who had higher number of ACEs were more likely to experience trafficking.

Servin, A. E., Brouwer, K. C., Gordon, L., Rocha-Jimenez, T. R., Staines, H., Vera-Monroy, R. B.,…& Silverman, J. G. (2015). Vulnerability factors and pathways leading to underage entry into sex work in two Mexican–U.S. border cities. *The Journal of Applied Research on Children: Informing Policy for Children at Risk, 6*(1), 1–15. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4412591/

Researchers at the University of California, San Diego, looked at 20 qualitative interviews with female sex workers with a history of underage sex work in Mexico. The study found the median age of entry was 14, and 60 percent reported being forced or coerced into sex work. The authors identified three common themes: 16 reported family dysfunction (i.e., domestic abuse and parental substance use), 13 reported physical and sexual abuse in the home or community, and half reported a teen pregnancy. The three themes were found to increase the risk of underage sex work as women used sex work as a means to support themselves after being kicked out, running away, or moving out to escape abuse and to support themselves and dependents after being rejected by support systems after disclosure of a teen pregnancy. The authors argue that identification of potential vulnerabilities and pathways leading to underage sex work could be used for intervention programs that address the needs of at-risk populations and to provide alternatives to underage sex work.

Shah, M. F., Liu, Q., Mancuso, D., Marshall, D., Felver, B. E. M., Lucenko, B., Huber, A. (2015). Youth at risk of homelessness: Identifying key predictive factors among youth aging out of foster care in Washington State. Olympia, WA: Washington State Department of Social and Health Services. Retrieved from https://www.dshs.wa.gov/sites/default/files/SESA/rda/documents/research-7-106.pdf

This report is the result of a Youth at Risk of Homelessness (YARH) grant to Washington state and concerned with identifying key risk and protective factors for homelessness once young adults age out of the foster care system. The sample included 1,213 youth who left foster care, were 17 years or older, and who did not return to foster care. The study identified three primary findings: (1) one in four were homeless within 12 months of leaving foster care; (2) youth who experienced multiple placements, changed schools frequently, or had two or more foster care placements were more likely to face housing instability; and (3) youth involved in both foster care and the juvenile justice system were more likely to face homelessness.

Turney, K., & Wildeman, C. (2016). Mental and physical health of children in foster care. *Pediatrics 138*(5). Retrieved from http://pediatrics.aappublications.org/content/pediatrics/138/5/e20161118.full.pdf

This 2016 study examined the mental and physical health of youth in foster care compared to nationally representative youth, children adopted from foster care, economically disadvantaged children, and children from specific family types such as single-mother households. Compared to youth not in foster care, the authors found that youth in foster care are more likely to have a learning disability, asthma or speech problems, a diagnosis of ADD/ADHD, hearing and vision problems, anxiety, behavioral problems, and depression. Even when adjusted for other individual or household characteristics, foster care still had an observable effect on mental health issues. While children from foster care had significant differences in rates of mental health outcomes, there was not significant change in physical health outcomes. Furthermore, of children in the foster care system, those adopted from the system had worse health than others. The authors indicate that health conditions for youth in foster care are underreported but that the research is useful in helping to inform professionals in the field and practitioners that health problems are more likely when a child is placed in the foster care system.

Turney, K., & Wildeman, C. (2017). Adverse childhood experiences among children placed in and adopted from foster care: Evidence from a nationally representative survey. *Child Abuse and Neglect, 64*, 117–129. Retrieved from http://dx.doi.org/10.1016/j.chiabu.2016.12.009

This is the first nationally representative study analyzing the relationship between ACEs and youth in foster care. Using the 2011–2012 National Survey of Children's Health Study, researchers examined the exposure to ACEs children face when they are placed in the foster care system. Seven main ACEs were analyzed with this sample, including "(1) parental divorce or separation … (2) parental death … (3) parental incarceration … (4) parental abuse … (5) violence exposure … (6) household member mental illness … and (7) household member substance abuse." The researchers compared the quality and quantity of these ACEs to two different samples. They first wanted to look at ACEs comparing youth in foster care to youth not in foster care. Second, they were analyzing youth in foster care to children not in foster care but who still experienced socioeconomic disadvantage and/or various family living situations. This survey documented data from 91,261 of the 95,677 children represented in the National Survey of Children's Health Study sample. Of this sample, the data found that 1.4 percent of children had been in the foster care system at some point in their life. This data documented the largest percentage of children in the foster care system were non-Hispanic white children, representing 49.3 percent of the sample. Three prominent findings from this data are as follows: First, "a large percentage of children in foster care were exposed to ACEs." This data is pertinent because 75.5 percent of children in foster care in this sample had experienced at least one ACE, with parental divorce/separation ACE being the most common—45.4 percent of children in foster care. The second finding was children in the foster care system "…had greater odds of experiencing all seven individual measures of ACEs … greater odds of experiencing any ACE and, on average, experienced a larger number of ACEs" than those children who never faced the system. This result was also true when the researchers compared children in foster care to children in disadvantaged socioeconomic environments and various family structures. The researchers phrase children in foster care as being "uniquely disadvantaged" due to these children experiencing more measures of ACEs than any other group of children they analyzed.

UNHCR (United Nations High Commissioner for Refugees). (2014). Children on the run: Unaccompanied children leaving Central America and Mexico and the need for international protection. Washington, DC. Retrieved from http://www.unhcr.org/56fc266f4.html

The purpose of the Children on the Run report was to identify why children leave their countries of origin and whether they are in need of international protection. UNHCR conducted indepth interviews based on 73 open-ended and closed-ended questions with 404 UACs from El Salvador, Guatemala, Honduras, and Mexico. In general, children reported protection-related reasons for leaving their country of origin, though other nonprotection reasons were provided. Two trends/types of violence emerged as significant: violence committed by organized crime groups and violence committed in the home. A third type of violence was unique to children from Mexico, as 38 percent of Mexican children reported being recruited and exploited in participating in human smuggling.

Wade, R., Shea, J. A., Rubin, D., & Wood, J. (2014). Adverse childhood experiences of low-income urban youth. *Pediatrics, 134,* e13–e20. Retrieved from http://pediatrics.aappublications.org/content/134/1/e13

Focus groups were created by the researchers to hear first-hand the ACEs they were exposed to while living in a low-income, inner-city community. Researchers sampled 105 participants between ages 18 and 26 who lived in a section of Philadelphia that consisted of at least 20 percent of residents living under or at the federal poverty level. Researchers analyzed 10 measures for ACEs, including "…family relationships, community stressors, personal victimization, economic hardship, peer relationships, discrimination, school, health, child welfare/juvenile justice, and media/technology." The purpose of these 10 groupings were for the researchers to analyze the measure that happened the most often among urban populations and which were least likely to occur in these communities. The findings include family relationships (e.g., substance use, death in the family, single parent, violence in the home, etc.) and community stressors (e.g., violence) as the most common ACE experienced by this sample of urban youth. A very interesting finding from this research is that while "[r]acism has a strong and lasting impact on the health of minorities…few respondents endorsed racism and discrimination as a significant childhood stressor." These findings endorse the idea that there needs to be more focus on other ACEs that occur within the urban community, as they have a stronger negative influence on the youth.

Warne, D., & Lajimodiere, D. (2015). American Indian health disparities: Psychosocial influences. *Social and Personality Psychology Compass,* 567–579. Retrieved from https://www.ndsu.edu/fileadmin/publichealth/files/Warne_Lajiomodiere_SPPC_Final.pdf

The main purpose of this study was to examine data from five categories of experiences that contribute to health disparities currently faced by American Indian communities. The five categories measured include historical trauma, American Indian boarding schools, ACEs, food programs, and adverse adulthood experiences. While a more historically based article, several significant points were made. First, "…the damage from boarding school abuse, loneliness and lack of love, and lack of parenting is seen as a key factor in the illnesses that plague tribes today." Second, the prominent ACEs associated with American Indian communities include various forms of abuse, substance use or mental illness in the home, domestic violence, and incarcerated family members. Abuse is a significant ACE to analyze due to the mental health issues that arise from children knowing they are abused. Third, American Indian communities "… [have one of] the highest poverty rates; [they] also suffer from among the lowest educational attainment in the nation."

Zimmerman, C., Hossain, M., Yun, K., Roche, B., Morison, L., & Watts, C. (2006). Stolen smiles: A summary report on the physical and psychological health consequences of women and adolescents trafficked in Europe. London: The

London School of Hygiene & Tropical Medicine. Retrieved from https://www.choa.org/~/media/files/Childrens/medical-professionals/physician-resources/cpc/stolen-smiles.pdf

The authors developed a report on the physical and psychological health effects of trafficking on 207 women and adolescents in Europe. Interviews occurred in three stages—crisis intervention, adjustment, and long-term symptom management—and were conducted in 8 different languages and 14 countries. While the report primarily focuses on the physical and psychological effects of trafficking, the authors found that one out of five women were trafficked by someone she knew or someone a relative knew (i.e., a family member was involved in the trafficking or who may have known the trafficker without knowledge of the true nature of the trafficker). The study also indicates that more than 70 percent of women and adolescents were unmarried before being trafficked. Nearly 40 percent had children, of which 82 percent were unmarried before trafficking. Prior to trafficking, 60 percent of women and adolescents reported a history of violence, 32 percent reported sexual abuse, 50 percent reported physical assault, and 22 percent reported both sexual and physical abuse. Additionally, 15 percent were forced or coerced into a sexual experience prior to age 15 (more than half perpetrated by a family member), and 26 percent were forced or coerced into a sexual experience after age 15 (primarily by an acquaintance or stranger).