

Experiences in the Foster Care System and Criminality in Women

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Abstract

Research has shown that adults who were placed in foster care (FC) as youth are more likely to engage in offending behaviour in adulthood than adults who were not involved in FC as youth. The current study aims to understand the factors that may drive the association between foster care involvement and criminality by comparing the experiences of 49 criminalized and 126 non-criminalized women who have spent time in FC. Participants were asked via online survey about their offence history, their experiences in FC, and the circumstances that led to their placement in FC. Results suggest that adverse childhood experiences, underage alcohol use, and out-of-school status were associated with offending behaviour for women who had been involved in FC. However, contrary to the study's hypotheses, social bonds and placement characteristics were not found to be associated with offending for this population.

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In Canada, Child Protection Services (CPS) was established to protect children from harm and ensure they receive appropriate care (Children and Family Services Act [CFSA], 1990). CPS intervention may occur when a child is at a substantial risk of being harmed or neglected, or if certain needs (i.e., disabilities, behavioural problems, etc.) are not being met. These interventions may lead to the provision of in-home services to ensure the safety and well-being of the child. However, if it is deemed beneficial for the child, they may be removed from the family and placed in foster care (CFSA, 1990). Because CPS intervention is often required in situations where a child is being abused, neglected, or a care-giver is otherwise unable or unwilling to appropriately care for the child, a child's involvement in CPS and the foster care system may be associated with a number of adverse childhood experiences which occur prior to CPS intervention (e.g., Asscher et al., 2015; Haapasalo, 2000; Hayden & Graves, 2018).

Adverse childhood experiences (ACEs) refer to specific types of experiences a young person may face. ACEs include instances of physical, emotional, or sexual abuse, physical or emotional neglect, household substance abuse, mental illness or domestic violence, parental separation or divorce, and having a household member incarcerated (Baglivio et al., 2015; Craig et al. 2017; Fox et al., 2015). ACEs such as abuse and neglect are common reasons for a child to be placed in foster care, and many children in care have experienced some form of maltreatment in their childhood (CFSA, 1990; Haapasalo, 2000). In addition to ACEs prior to CPS contact, it has been found that children who are clients of CPS, particularly those placed in foster care, may experience further adversities and negative outcomes related to their placement and time spent in foster care. Specifically, removing a child from their original family unit to be placed in foster care, as well as placement changes which may occur in foster care, may negatively impact the

child's ability to form and maintain social bonds (Hayden & Graves, 2018; McMahon & Fields, 2015; Yang et al., 2017). Furthermore, children in care have been found to have difficulties with substance abuse, academic success, and mental health problems (e.g., Hayden & Graves, 2018; McMahon & Fields, 2015; Mersky & Janczewski, 2013).

Certain characteristics of a child's experience in foster care, including ACEs and other difficulties which children in care may experience, have been associated with offending behaviour in adolescence and adulthood. Specifically, childhood maltreatment, parental criminality, parental substance abuse, issues with social bonding and closeness, difficulties with substance use, academic challenges, and mental health problems have been associated with both foster care involvement and offending behaviour (e.g., Baglivio et al., 2015; Hayden & Graves, 2018; Yoon et al., 2018). In addition to these experiences, certain characteristics of the foster care placement itself may also be associated with offending behaviour. For example, frequent placement changes, older age at first placement, and placement in residential care such as a group home or institution, as opposed to placement with a foster family, are associated with higher rates of offending (Haapasalo, 2000; Hayden & Graves, 2018; Yoon et al., 2018).

Although literature on the direct association between foster care involvement and criminality is limited, a handful of studies have found that children in care are more likely to become involved in offending behaviour than those who have not been involved in the foster care system (Haapasalo 2000; Mäki et al., 2003; Mersky & Janczewski, 2013; Yang, et al., 2017).

Although there are several factors related to foster care which are associated with offending, factors which may decrease the risk of offending of children in care and/or counteract negative experiences and outcomes associated with foster care and offending may also be present (Craig et al., 2017; Mullis et al., 2004). Researchers argue that identifying these protective

factors is important in managing offending risk as they may help to mitigate the impact of negative factors such as ACEs (Craig et al., 2017).

Of the limited pool of research that has explored the association between involvement in foster care and offending, the majority focuses on males. Much of the research on foster care and offending includes either no, or very few female participants or does not specify the gender make-up of their sample (e.g., Haapasalo, 2000; Mäki et al., 2003; Marquis et al., 2008). Although research on the foster care-offending association has scarcely been explored in females, it has been speculated that gender may moderate the association between foster care and offending. However, the literature on gender differences is by no means extensive; few studies have explored the differences in offending behaviour between male and female children in care, and the results of these studies are inconsistent and have significant limitations including low numbers of female participants and lack of gender comparisons (Barret et al., 2015; Otterström, 1946, as cited in Haapasalo, 2000, p. 356; Yang et al., 2017). Considering these limitations, inconsistencies, and the lack of research on offending behaviour in girls in care, it is unclear what the nature of the foster care-offending association is for women and girls.

The present study aims to develop an understanding of how women's experiences in the foster care system may relate to criminality by comparing the experiences of criminalized and non-criminalized foster care-involved women; that is, women who have had a history of conflict with the law in the form of arrests, charges, convictions and/or incarceration, and those who have no history of conflict with the law. Specifically, the current study identifies and compares the ACEs of each group, their experiences with making and maintaining social bonds with caregivers, the characteristics of their placement(s), and other difficulties they may have experienced during the time they were involved with the foster care system. Through exploring

the differences in these experiences between criminalized and non-criminalized women, the current study addresses specifically what aspects related to foster care may be associated with the criminalization of women.

Foster Care and Criminality

Although the literature on the association between foster care and criminality is limited, findings from some studies do offer empirical support suggesting that foster care involvement is associated with offending. For example, in their correlational study, Yang et al. (2017) considered a sample of 364 young, serious, and violent offenders in British Columbia, of which 58% had at least one foster care placement. In comparing the offending behaviour of youth offenders who had and had not been involved in foster care, Yang et al. (2017) found that foster care-involved youth tended to offend more frequently, began offending at a younger age, and were more likely to continue offending into adulthood than non-foster care involved youth. Yang et al. (2017) also found that foster care-involved youth tended to spend more time incarcerated and were more likely to be convicted of administrative offences (i.e., parole violations), than non-foster care involved youth. Similarly, Ryan et al. (2007b) found that children in care tended to receive more punitive sentences than children who were not in care. The authors speculated that this correlation may be due to biases against foster care involved youth in the criminal justice system, however these studies do not provide any evidence to support this. These findings indicate that involvement in foster care may have some impact on criminality, however it is not clear based on these results what it is about foster care involvement that may lead to offending behaviour.

Some studies suggest that it may not be the foster care system itself that is associated with offending outcomes, but rather the situations that lead to CPS intervention, such as

childhood maltreatment. A study by Mersky and Janczewski (2013) compared three groups of children: those who had been maltreated and involved in foster care, those who had been maltreated but were not involved in foster care, and those with no record of maltreatment or foster care involvement. Findings from this study suggested that, among other negative outcomes, maltreated, foster care involved children were more likely to have a criminal record than non-maltreated, non-foster care involved children, but not non-foster care involved children who had been victims of maltreatment. Given that both maltreated groups had a similar likelihood of having a criminal record regardless of foster care involvement, the authors suggested that it might not be the case that foster care involvement is increasing the risk of future offending, rather foster care placements might be ineffectively mitigating the risk associated with the maltreatment which children in care may experience before entering the foster care system or that maltreatment may explain the relationship. (Mersky & Janczewski, 2013). Contrary to findings from Mersky and Janczewski (2013), a meta-analysis from Yoon et al. (2018) suggested that maltreated children who are involved in foster care have higher rates of offending than maltreated children who are not foster care involved but receive in-home CPS care. Considering these results in conjunction with the suggestion from Mersky and Janczewski (2013) that foster care placements may not be effectively mitigating the harmful effects of maltreatment, it may be the case that in-home care is a more effective alternative to out-of-home foster care placements for reducing the risk of future offending. Although there is some empirical support for the existence of an association between foster care involvement and offending, the exact nature of the association is still highly speculative. Much of the existing literature suggests that the history of maltreatment many children in care experience may be a key mediator in this correlation.

Childhood Trauma

In addition to childhood maltreatment, research on ACEs and other trauma has found that many forms of trauma experienced during childhood, including abuse and neglect, may be associated with offending behaviour in the future. Research on ACEs specifically, has found that ACEs, including various forms of abuse and neglect, household substance abuse, mental illness and domestic violence, parental separation or divorce, and the incarceration of a family/household member, are associated with more serious and higher rates of offending in youth (Baglivio et al., 2015; Fox et al., 2015). For example, Fox et al. (2015) found that ACEs were a strong predictor of serious, violent, and chronic offending, with 90% of serious, violent, and chronic offenders from their sample having at least one ACE. More specifically, when compared to those who had committed only one offence, serious, violent, and chronic offenders were more likely to have had an incarcerated parent, have experienced emotional or physical abuse and/or neglect, have experienced household substance use or mental illness, and have witnessed household violence. Similarly, Baglivio et al. (2015) found that a higher number of ACEs was associated with earlier age of onset of offending and more chronic offending in adolescence. Although these studies establish a correlation between various forms of trauma experienced in childhood and offending, they do not address if or how foster care is associated with offending. However, considering the findings from ACE studies alongside evidence from studies on foster care and trauma, this association begins to become clearer. For example, in a sample of young offenders, Haapasalo (2000) found that neglect, maternal alcoholism, and paternal criminality are all good predictors of CPS intervention. Similarly, in a descriptive study, Hayden and Graves (2018) found that, in a sample of children in care who had offended, 39.1% had a criminalized family member. From this, it is apparent that many of the ACEs associated with offending are likely present in many foster care involved youth. Based on this evidence

from various studies, it seems that a correlation exists between trauma, foster care, and offending, but it is not clear what the nature of this correlation may be. However, the support for an association between trauma and offending, and trauma and foster care separately give some insight to the association between foster care and offending, as well as reason to further explore this association.

Separation in Foster Care and Social Bonding

Aside from ACEs, children in care often experience other forms of trauma upon entering the foster care system, including separation from their parents, homes, and possibly siblings and extended family. In addition to this initial separation, children in care may continue to experience separation from caregivers via placement changes (e.g., Hayden & Graves, 2018; McMahon & Fields, 2015; Yoon et al., 2018). Although initial and subsequent separation from caregivers is carried out to protect children and ensure they are receiving the most appropriate care, research has found that these interruptions in social bonds may have a negative impact on a child (Mäki et al., 2003; McMahon & Fields, 2015).

The literature on foster care has focused very little on the impact of parent-child separation on offending outcomes, however the association between parent-child separation and offending has been explored outside of the context of foster care. For example, a study by Mäki et al. (2003) explored offending outcomes in children who had been temporarily separated from their families at birth for an average of seven months, in order to prevent the spread of tuberculosis to the newborns. Instead of going home with their families, infants born between 1945 and 1965 to a home with an infected family member, would stay in a specialized care home, to be looked after by nurses until it was safe for them to return home. Researchers found that this temporary separation was associated with slightly higher offence rates in adulthood,

compared to children who were not separated from their families at birth. Specifically, of men who had been separated, 38.4% had committed general offences and 12.1% had committed violent offences, compared to the reference group of which 30.5% had committed general offences and 7.1% had committed violent offences. Men who had been separated were 1.5 times more likely to commit a new, violent crime compared to the reference group. Women who had been separated from their families showed a similar trend for general offences, with 9.1% of the women who had been separated from their family having committed a general offence, compared to 5.9% of the reference group. Women who had been separated from their families were 1.5 times more likely to commit a non-violent offence than women who had not been separated. However, the study provided no information on violent offence rates for women as these instances were rare. Mäki et al. (2003) suggests that this association between parent-child separation and offending may be a product of social bonding with nurses being interrupted, and/or delayed bonding with parents.

Mäki et al. (2003)'s explanation that the association between parent-child separation and offending may be a product of social bonding issues makes sense considering findings from the literature on social bonding, attachment, and offending, suggesting that stronger social bonds and more stable attachment with parents is associated with lower offence rates in youth and higher rates of desistence in young offenders (Chan & Chui, 2015; Schroeder et al., 2010; Schroeder et al., 2014). In particular, it has been found that stronger bonds and more stable attachment with parents is correlated with lower offence rates across ethnicities and genders (Chan & Chui, 2015; Schroeder et al., 2010). Furthermore, a study looking at the life-course of young offenders found that children who had a stronger bond with their parents were more likely to desist. Specifically, "...each unit increase in the strength of the adult child-parent bond was associated with an 81.8

percent increase in the odds of stable criminal desistance...” (Schroeder et al., 2010, p. 566). This association is concerning in the context of children in care, as, while in foster care, youth may experience limited caregiver closeness with their foster care families (McMahon & Fields, 2015). Research has shown that children in care who experience limited closeness with their foster caregivers committed more offences than children in care who felt closer to their foster caregivers (McMahon & Fields, 2015). When taken together, the literature on social bonding, attachment, and offending seem to suggest that the impact of foster care involvement on a child’s attachment and closeness with both biological and foster care families may be associated with the child’s likelihood of offending. Furthermore, issues with social bonding have been found to be associated with offending outside of the context of foster care, however little research has explored this association in the context of foster care. It is important to continue to develop an understanding of specifically how foster care system interactions may be impacting a child’s relationships and how this impact may affect future outcomes related to criminality for children in care.

Although the literature on the impact of social bonds on offending in the context of foster care is limited, research on foster care and offending has explored the impact of placement changes on children in care outside the context of social bonds in some depth. Placement changes have been found to be associated with offending throughout the literature on foster care with frequent changes or more placement instability being associated with higher rates of offending, and spending more time in fewer, more stable placements being associated with lower rates of offending (Haapasalo, 2000; Hayden & Graves, 2018; Ryan et al., 2007a; Yoon et al., 2018). For example, studies by Haapasalo (2000), and Hayden and Graves (2018) each found that staying in a single placement for a longer amount of time was correlated with lower offence

rates in children in care. Similarly, a study by Ryan et al. (2007a) exploring predictors of offending in boys in care found that placement instability was among the three most important predictors of offending for this population. A meta-analysis by Yoon et al. (2018) found similar results among children in care who had been maltreated, where more placement changes were associated with higher rates of offending for maltreated foster care involved youth. Although these studies did not explore the role of social bonds and attachment, each of the authors speculated that the association between placement changes and offending may be due to the disruptions in forming and maintaining social bonds which these changes may bring about. Specifically, Haapasalo (2000) suggested that placement changes may cause a disruption in forming a secure attachment with caregivers. Hayden and Graves (2018) added that the unstable living environment associated with placement changes may be a source of trauma for children in care. When considering this research along with findings from research on social bonds and criminality, it seems possible that social bonding and attachment may, in fact, play an important role in the foster care-offending association. However, further research on social bonding and attachment in the context of foster care involvement and placement changes is necessary to support this speculation.

Foster Care Placement Characteristics

In addition to placement changes, research on foster care has found that other characteristics of foster care placements, including type of placement, and age at first placement may be associated with offending (Haapasalo, 2000; Yoon et al., 2018). When children in care are placed in foster care they may be placed with a foster family or in residential care (i.e., a group home or institution). It has been found that placement in residential care, as opposed to placement with a foster family, is associated with higher rates of offending. Specifically, a meta-

analysis by Yoon et al. (2018) found that placement in residential care is associated with higher rates of offending in children in care with a history of maltreatment. Furthermore, in a sample of offenders who had been placed in foster care, Haapasalo (2000) found that 94% had been in residential care, compared to 42% who had been placed with a foster family. As a whole, 87% of the sample had been in both types of care, and only 13% of children in care who had offended had been placed only with a foster family. These retrospective results suggest that the type of placement may have an impact on offending outcomes for children in care, with residential care placements being more associated with offending outcomes than placements with foster families. However, it is not clear why residential care is associated with offending outcomes, perhaps it may be due to the quality and nature of relationships in these types of placements which lack a typical home environment and family structure. Haapasalo (2000) and Yoon et al. (2018) also found that a child's age at the time of their first placement may also have an impact on offending outcomes. Specifically, older age at first placement was associated with higher offence rates (Yoon et al., 2018), with most children in care who offend having their first placement after age 13 (Haapasalo, 2000). Considering research on ACEs and reasons for CPS intervention, the association between age at first placement and offending may be due to intervention occurring after a longer period of exposure to ACEs. Yoon et al. (2018) suggested that developing stronger intervention strategies for maltreated youth may be an appropriate response to this. Based on these findings, as well as the research on placement changes, it is apparent that certain characteristics of foster care placements may have an impact on offending outcomes for children in care, however the nature of these associations has only been speculated on. Further research on placement characteristics is prudent to help inform what aspects of foster care may be harmful, as well as propose feasible alternatives which may help reduce offending outcomes.

Academic Difficulties, Substance Use, and Mental Health

Children in care may experience several negative outcomes which may be related to foster care involvement, including academic difficulties, difficulties with substance use, and mental health problems; all of which have been associated with offending behaviour in children in care or are common in children in care who offend during childhood and adolescence and/or as adults (e.g., Clausen et al., 1998; Hayden & Graves, 2018; McMahon & Fields, 2015). It has been found that many children in care experience academic difficulties during their time in the education system. Specifically, Merskey and Janczewski (2013) found that children in care, as well as maltreated children with no CPS record, were significantly less likely to graduate high school and had a lower overall academic attainment than their peers who were not in care and non-maltreated peers. These academic difficulties which children in care may experience are also associated with offending outcomes. Out-of-school status in particular, has been found to be an important predictor of criminality in children (McMahon & Fields, 2015; Ryan et al., 2007a). There are various reasons why a young person may have out-of-school status, including suspension or expulsion due to behavioural problems, and voluntary or involuntary truancy or drop-out. The reason children in care were not attending school may impact the association between out-of-school status and offending, however these reasons were not explored (McMahon & Fields, 2015; Ryan et al., 2007a). However, research from Australia and Portugal suggests that the association between educational attainment, out-of-school status and offending may be linked to young people's emotional and behavioural experiences in the education system, including suspensions, poor relationships, lack of encouragement/support, and finding school very difficult due to outside/uncontrollable factors (Moore & MacArthur, 2014; Saraiva et al., 2011). Further research into the reasons why children in care may be struggling in academic

settings may be beneficial in identifying possible solutions to this issue, as well as further understanding the foster care-offending association.

It has been established in previous research that there is an association between substance use and offending for both men and women, and among youth and adults (D'Amico et al., 2008; Fazel et al., 2017; Johnston et al., 2005). A meta-analysis from Fazel et al. (2017), which looked at rates of substance use among incarcerated individuals across 10 countries, found that substance use disorders are common in incarcerated individuals. Specifically, estimated rates of alcohol use disorders were highly heterogenous between studies, with alcohol use disorder having been present in 26% of incarcerated men and 20% of incarcerated women (Fazel et al., 2017). Similarly, prevalence rates for drug use disorders were substantially heterogenous between studies. Estimated prevalence of drug use disorder was 30% for incarcerated men and 51% for incarcerated women. Regarding youth offenders, D'Amico et al. (2008) found that substance use was associated with a higher likelihood of non-drug-related offending (specifically interpersonal offences, and property offences) in adolescents. Substance use diagnoses have also been found to be associated with offending behaviour in children in care specifically (Hayden & Graves, 2018; McMahon & Fields, 2015). Hayden and Graves (2018) found that many children in care who have offended used drugs and alcohol. In their sample, 79.7% of children in care who had offended drank alcohol and 59.4% used drugs. Furthermore, McMahon and Fields (2015) found that drug abuse diagnoses were a strong and consistent predictor of extensive offending behaviour in children in care.

Like substance use, mental illness has also been found to be associated with offending behaviour, particularly in women (Brown et al., 2018; DeHart et al., 2014; Fazel et al., 2016). A meta-analysis by Fazel et al. (2016), looking at the mental health of incarcerated individuals,

found that certain mental illnesses, including major depression, psychosis, and comorbidity of substance use disorders and other mental illness, were highly prevalent in incarcerated populations. Mental health diagnoses, specifically depression and substance use disorders, were more prevalent in incarcerated women than incarcerated men. Similarly, Brown et al. (2018) and DeHart et al. (2014) found high rates of mental health diagnoses in women offenders. Of the incarcerated women who were interviewed by Brown et al. (2018), over 75% had a lifetime or current mental health diagnosis. DeHart et al. (2014) found that at least 50% of the incarcerated women in their sample met the criteria for a serious lifetime diagnosis. Comorbidity of substance use disorders and other mental illnesses were also common in these samples (Brown et al., 2018; DeHart et al., 2014). Other mental health diagnoses are also common among children in care as well as children in care who offend (Clausen et al., 1998; Hayden & Graves, 2018). A study comparing rates of mental health problems in children in care to average rates of mental health problems in youth found that children in care had considerably higher rates of mental health problems (Clausen et al., 1998). In a sample of children in care who had offended, Hayden and Graves (2018) found that nearly half (48.4%) had recorded mental health issues. Considering the prevalence of substance use and mental health diagnoses in children in care who offend, it may be beneficial to consider whether foster care involvement itself may be associated with these issues.

Protective Factors for Foster Care Involved Youth

In addition to factors which may be associated with offending in children in care, it is also important to identify protective factors which may be present for foster care involved youth. These factors may be beneficial in mitigating the impact of some of the negative experiences children in care may experience which are associated with offending (Craig et al., 2017; Mullis

et al., 2004). Although research on protective factors has not been explored in the foster care-offending literature directly, protective factors associated with some common experiences of children in care have been identified in other literature. Specifically, certain protective factors related to a child's personality have been identified for children with ACEs (Craig et al., 2017). Furthermore, issues that may arise when children in care experience limited caregiver closeness (e.g., Hayden & Graves, 2018; Mäki et al., 2003;), may be counteracted by protective factors, such as social supports and positive relationships outside of the family (Mullis et al., 2004).

As mentioned, ACEs, many of which are common among children in care, are associated with offending behaviour (Baglivio et al. 2015; CFSA, 1990 Fox et al., 2015). However, a study by Craig et al. (2017) identified a number of protective factors that decreased the likelihood of offending during childhood and adolescence, in children with at least one ACE, including: low daring, low hyperactivity, low impulsivity, low neuroticism, low dishonesty, and low troublesomeness. Furthermore, studies looking at the Five Factor Model of Personality have found that certain personality traits may be associated with differential rates of offending; specifically, low neuroticism, high agreeableness and high openness have been associated with lower offence rates (Becerra-García, 2013; Jolliffe, 2013; Wiebe, 2004), and high extraversion alongside a 'non-intact' family has been associated with offending in girls (Jolliffe, 2013). Although these studies did not explore protective factors in the context of children in care directly, the presence of the factors identified in this study may help to mitigate the negative impact which ACEs may have on foster care involved youth.

Mullis et al. (2004) identified having a quality relationship with at least one caregiver as a protective factor for adolescent girls. Recalling findings from McMahon and Fields (2015), caregiver closeness is something that children in care may struggle with, and limited caregiver

closeness is associated with increased offending outcomes in children in care. However, Mullis et al. (2004) suggest having a person or group of people who offer social and/or emotional support outside of the family may be a substitute for a close relationship with a caregiver. Considering these results, the presence of a positive adult role model, mentor, or extended family member, or support group of prosocial peers may counteract the impact that limited caregiver closeness within the original and/or foster family may have.

Considering the lack of research on protective factors, especially with regard to children in care, further exploration of the role of certain personality traits and social supports in reducing risk of offending in children in care would be beneficial. Exploring these protective factors in the context of foster care would aid in further understanding the foster care-offending association.

Gender Differences in the Foster Care-Offending Association

Little of the literature on foster care and offending has focused on women offenders. Many studies include little to no female participants or do not discuss the gender make-up of the sample at all (e.g., Marquis et al., 2008; Mersky & Janczewski, 2013; Ryan et al., 2007a; Yang et al., 2017). The lack of female representation in the literature on the foster care-offending association is particularly troubling as it has been suggested that this association may not be the same for females as it is for males (Otterström, 1946, as cited in Haapasalo, 2000, p. 356; Yang et al., 2017), however the literature on gender differences in the foster care-offending association is scarce and results are inconsistent. Yang et al. (2017) found that, although female youth offenders were more likely to be involved in foster care than male youth offenders, girls in care spent less time incarcerated and had fewer convictions overall than boys in care. Yang et al. (2017) speculate that "...the influence between foster care and offending may be specific to males" (p. 52), however, it is important to consider that only 15.1% of their sample were female

and that women offenders tend to receive shorter sentences and are less likely to be sentenced than men offenders (Kong & AuCoin, 2008). Contrary to the suggestion that this correlation may be unique to males, Barret et al. (2015) found that in a sample of all girls, those who had been involved in foster care were twice as likely to offend in the future than those who had not been involved in foster care. Although this study does not compare men and women offenders, these results suggest that the correlation between foster care involvement and offending is present for females. Furthermore, Otterström (1946, as cited in Haapasalo, 2000, p. 356) found that, compared to children who had never been involved in foster care, three times as many boys and six times as many girls who had been involved in foster care had offended in the future. These findings suggest that the correlation between foster care involvement and offending behaviour in youth may be stronger for girls than for boys.

The inconsistencies in the findings from previous research may be due to limitations in the studies. For example, the suggestion that the foster care-offending association may be exclusive to males is based on results yielded from a sample made up of only 15.1% girls (Yang et al., 2017). Furthermore, findings from Otterström, (1946, as cited in Haapasalo, 2000, p. 356) which suggest a stronger foster care-offending association for females than males, were obtained over half a century ago and may no longer be relevant presently. Based on these findings from the very limited pool of research on foster care involvement and offending in women, it is currently unclear whether the foster care-offending association is the same for women and girls as it is for men and boys. Further research on the foster care-offending association in women is necessary to ensure that any action taken to mitigate the risks associated with foster care and offending are relevant to both males and females.

Current Study

The present study explores the association between foster care and criminal offending in women by comparing how experiences in foster care differ between criminalized and non-criminalized women. For the purposes of the current study, “criminalized women” refers to any person who identifies as a woman and who has been in conflict with the criminal justice system in the form of being arrested, charged, convicted, or incarcerated for any offence. “Non-criminalized women” refers to people who identify as women and who have not been in conflict with the law in the ways mentioned above at any point during their lifetime. These groups are compared on their ACEs, which may have occurred before or during their time spent in foster care; their ability to make and maintain social bonds with caregivers and peers; characteristics of their placement(s); any difficulties they may have experienced during their time in foster care; and the presence of protective factors that may reduce the risk of criminalization. The experiences that are explored are informed by the existing literature on foster care and offending.

Previous research suggests that foster care involvement may be associated with higher rates of offending for children in care compared to children not in care. However, the literature on foster care and offending is limited and often speculative, and the exact nature of the foster care-offending association, especially for women and girls is unclear (Barret et al., 2015; Otterström, 1946 as cited in Haapasalo, 2000, p. 356; Yang et al., 2017). Considering the lack of research on this topic, it is difficult to know exactly what aspects of foster care involvement might be associated with offending behaviour. For this reason, the current study aims to develop a more exhaustive understanding of the experiences criminalized women tend to have in the foster care system and to understand how foster care involvement is (or is not) associated with their criminality, as well as how the presence of certain protective factors may reduce the likelihood of future criminalization.

In addition to the scarcity and speculative nature of the literature on foster care and offending, few studies on the topic address differences between children in care who offend later in life and children in care who do not go on to commit any offences. Furthermore, despite some evidence of gender differences in the foster care-offending association, little of the existing literature on the topic focuses on women. The current research aims to address areas in the previous literature that need further exploration. Specifically, because little of the existing literature has focused on women, and findings from the literature that has focused on women have been inconsistent, the current study has recruited people who identify as women and, who have been involved in foster care as participants. Furthermore, the current study compares children in care who go on to offend later in life to children in care who do not, to explore how the experiences of these two groups differ. This allows researchers to pinpoint specific experiences that are more often present in the criminalized group and therefore may be associated with offending. Finally, the current study addresses speculations surrounding the nature of the foster care-offending association, which previous literature has discussed, specifically regarding potential biases against children in care in the criminal justice system, and the association between placement changes and social bonds (Hayden & Graves, 2018; Ryan et al., 2007b; Yang et al., 2017). The goal of the present study is to explore how experiences in foster care differ between criminalized and non-criminalized women who have been involved in foster care. Understanding these differences will help to identify what experiences a woman may have in the foster care system which may be associated with offending.

Hypotheses

The first set of hypotheses addresses ACEs which may be associated with foster care involvement and offending. Previous research has found that higher overall ACE scores are

associated with higher rates of offending and more serious offending (Baglivio et al., 2015; Fox et al., 2015). Furthermore, some studies have found that certain individual ACEs which are relevant to foster care involvement, particularly childhood maltreatment and having an incarcerated parent, are associated with offending (e.g., Asscher et al., 2015; Barrett et al., 2015; Hayden & Graves, 2018). Based on this evidence from the existing literature, it is expected that:

- 1.1) Compared to non-criminalized women, criminalized women will report a higher number of ACEs overall.
- 1.2) Compared to non-criminalized women, criminalized women will be more likely to report having experienced some form of abuse during childhood.
- 1.3) Compared to non-criminalized women, criminalized women will be more likely to report having experienced some form of neglect during childhood.
- 1.4) Compared to non-criminalized women, criminalized women will be more likely to report having had at least one parent who was incarcerated during their childhood.

The second set of hypotheses addresses issues of attachment and social closeness with peers and caregivers in foster care involved children which may be associated with offending.

Although there is little evidence that a lack of social closeness in children in care is associated with offending, researchers who have found a correlation between foster care involvement and offending often speculate that unstable attachment to caregivers and difficulty forming and maintaining social bonds due to removal from the original family and placement changes may play a key role in this association (Hayden & Graves, 2018; McMahon & Fields, 2015; Yang et al., 2017). For this reason, it is expected that:

- 2.1) Compared to non-criminalized women, criminalized women will report less social closeness with any biological family member.

- 2.2) Compared to non-criminalized women, criminalized women will report less social closeness with any foster caregiver.
- 2.3) Compared to non-criminalized women, criminalized women will be more likely to report that they had trouble making and keeping social bonds with people outside of their family during the time they were in foster care.
- 2.4) Compared to non-criminalized women, criminalized women will report having experienced poorer parenting styles from their biological mother and/or other primary caregiver.

The third set of hypotheses addresses characteristics of foster care placements which may be associated with offending. Specifically, it has been found that placement in residential care, as opposed to placement with a foster family, older age at first placement, and frequent placement changes, are associated with offending in foster care involved youth (Haapasalo, 2000; Hayden & Graves, 2018; Yoon et al., 2018). Based on these findings, it is expected that:

- 3.1) Compared to non-criminalized women, criminalized women will be more likely to have spent time in residential care (i.e., group homes or institutions).
- 3.2) Compared to non-criminalized women, criminalized women will have become involved in foster care at an older age.
- 3.3) Compared to non-criminalized women, criminalized women will have had more placement changes.

The fourth set of hypotheses addresses difficulties that foster care involved children may face which may be associated with offending. Substance use, academic difficulties, and mental health problems have been found to be associated with both foster care and offending, and studies have found that the presence of these issues in children in care is associated with offending (e.g.,

Barrett et al., 2015; Hayden & Graves, 2018; McMahon & Fields, 2015). Considering these findings from previous research, it is expected that:

- 4.1) Compared to non-criminalized women, criminalized women will be more likely to report using substances during their childhood.
- 4.2) Compared to non-criminalized women, criminalized women will be more likely to report having been suspended or expelled from school.
- 4.3) Compared to non-criminalized women, criminalized women will report a lower level of education completed.
- 4.4) Compared to non-criminalized women, criminalized women will be more likely to report having skipped classes frequently.
- 4.5) Compared to non-criminalized women, criminalized women will be more likely to report having had a negative experience in the educational system.
- 4.6) Compared to non-criminalized women, criminalized women will be more likely to report having a mental health diagnosis in childhood.

The fifth set of hypotheses will address protective factors which may mitigate risks of offending associated with foster care involvement. These hypotheses are based on evidence that positive social support outside of the family and certain factors related to a person's personality may mitigate negative outcomes which may be associated with experiences that are common among children in care, such as ACEs and limited caregiver closeness (Craig et al., 2017; Mullis et al., 2004). Overall, it is expected that fewer protective factors will be present for criminalized women compared to non-criminalized women. Specifically, it is expected that:

- 5.1) Compared to criminalized women, non-criminalized women will score lower on personality measures on emotionality and extraversion.

- 5.2) Compared to criminalized women, non-criminalized women will score higher on personality measures on honesty-humility, agreeableness, and conscientiousness.
- 5.3) Compared to criminalized women, non-criminalized women will be more likely to report having a support person or group in their life.

Method

Participants

Participants included Canadians who identified as women, aged 18 or older, who had been involved in the foster care system at any point during their lifetime. Of the 175 Canadian women who participated in the study, two participants identified as trans women, and 173 were assigned female at birth. Participants' ages ranged from 18 to 59, with the mean age being 26.36. The majority of participants were White (79.4%), with the next most common ethnicities represented being Black (8.6%), and Indigenous (7.4%). A complete description of all ethnicities represented in the sample is shown in Table 1.

Table 1*Ethnicities Represented (N = 175)*

	Percent Identified in Sample (% (n))
Arab	0.6(1)
Black	8.6(15)
Chinese	1.1(2)
Filipino	0.6(1)
Indigenous	7.4(13)
Korean	0.6(1)
Latin American	2.3(4)
South Asian	4.6(8)
Southeast Asian	0.6(1)
West Asian	1.7(3)
White	79.4(139)

Note. Membership to ethnicity groups is not mutually exclusive for the purposes of this study.

Twenty-eight percent (N = 49) of the sample had been arrested at least once, this portion of the sample made up the criminalized group. The other 72% (N = 126), who had never been arrested, made up the non-criminalized portion of the sample. The number of arrests participants experienced ranged from 1 to 4. The majority of the criminalized participants (66.7%) had been arrested only once, with the mean number of arrests being 1.42, *SD* = 0.68. Participants' ages at the time of their first arrest ranged from 13 to 30 years old with the mean age at first arrest being

18.96, $SD = 3.31$. Additionally, 46.9% of the participants who had been arrested had been convicted of an offence, and 40.8% of those arrested had been incarcerated at least once.

The age at which participants entered the foster care system ranged from 1 to 18 years old, with the average age at entry being 9.45, $SD = 3.89$. Participants indicated that they entered the foster care system for various reasons. The most common reasons were poverty (48%), neglect (26.3%), and death of a caregiver (18.9%). A complete description of the reasons for foster care entry represented in this sample is reported in Table 2.

Table 2

Reasons for Entry into the Foster Care System (N = 175)

	Percent Represented in Sample (% (n))
Abuse	13.1 (23)
Death of caregiver	18.9 (33)
Domestic violence in the home	15.4 (27)
Incarceration of caregiver	5.7 (10)
Mental/physical illness of caregiver	12.0 (21)
Neglect	26.3 (46)
Parental substance abuse	4.6 (8)
Poverty	48.0 (84)
Special needs not being met	0.6 (1)
Other	0.6 (1)

Note. Membership to entry groups is not mutually exclusive for the purposes of this study.

Measures

Participants were directed to a series of 10 online questionnaires delivered via Qualtrics. These questionnaires focused on participants' demographics, offending history, foster care history, and experiences associated with foster care and/or offending, including characteristics of foster care placements, social closeness with family members and caregivers, ACEs, substance use, mental health diagnoses, education and experiences in the educational system, personality, and social supports.

Demographics

The demographics survey consisted of 5 questions (see Appendix C). Participants were asked whether they were a Canadian citizen, whether they had spent any period of their life in foster care, their current age, their ethnicity, and their gender identity. The questions about Canadian citizenship, foster care, age, and gender identity were used to determine whether participants were eligible to participate in the study. If participants indicated that they were not a Canadian citizen, were below the age of majority, had not spent anytime in the foster care system or were male, they were not eligible to participate. However, participants of any ethnicity were eligible to participate. These demographic questions were also used to help describe the sample.

Offence History

In order to determine whether participants belonged to the criminalized or non-criminalized group, participants were asked to complete a questionnaire on their offence history (Appendix D). This questionnaire focused on the participant's history of arrests, convictions, and incarceration. Specifically, participants were asked 6 to 10 questions regarding whether they had been arrested, convicted of an offence, or incarcerated, how many times they were arrested, convicted, or incarcerated, and what the convictions were. The number of questions participants

were asked depended on how many times they had been arrested; questions would be repeated up to 5 times for participants who had experienced multiple arrests or until the participant indicated that they had no more arrests to report.

History in the Foster Care System

Participants were then presented with a questionnaire asking about their history in the foster care system (Appendix E). In order to understand the details of participants' experiences in the foster care system in some depth, this questionnaire asked about the circumstances that lead to foster care placement, the age at which participants entered the foster care system, the length of time they spent in foster care overall, whether they remained in contact with their biological family members during the time they were in foster care, their perceptions of social closeness to others, both outside of and within their biological and foster care families, how many placement changes they experienced, and characteristics of each individual placement, if they had multiple (i.e. how old they were when the placement began, approximately how long the placement lasted, the type of placement it was, whether they experienced abuse/neglect during that placement, how they would rate their overall experience in the placement, how close they felt to others in the placement, and why the placement ended). This questionnaire included 21 to 57 questions depending on how many placements the participant experienced. The last set of questions regarding individual placements would be repeated up to 5 times or until the participant indicated that they had no more placements to report.

The average closeness rating from each participant was calculated and used in the analysis. Similarly, difficulty making and maintaining social bonds was calculated by finding the sum of measures for difficulty making friends, difficulty keeping friends, difficulty developing positive relationships with adults outside of the home, and difficulty being a member of social

groups, each of which were measured on a 7-point Likert scale. A Cronbach's alpha was obtained to check the reliability of this measure. The Cronbach's Alpha was .83 which indicates this measure had good reliability.

Adverse Childhood Experiences (ACEs)

To determine the number of ACEs each participant had experienced, an ACE measure which had been adjusted to include experiences both in and out of foster care placements was administered (Appendix F). This measure was based on the version of the ACE measure used by the Center for Health Care Strategies (CHCS) (Schulman & Maul, 2019). The ACE measure asked participants about their experiences with abuse, neglect, parental separation or divorce, and household substance use, mental illness, incarceration, and domestic violence. A higher score on the ACE measure indicates that the participant has experienced a higher number of ACEs. For the adjusted version of the ACE measure used in this study participants were asked whether they experienced each ACE and were then asked whether they experienced this ACE while they were living with their original family, with a foster family, in a group home or institution, or somewhere else. Participants could select more than one location where they experienced each ACE.

The ACE measure is commonly used to measure adverse childhood experiences and the measure has been found to have good predictive validity of offending behaviour (Baglivio et al., 2017; Craig et al., 2015). Additionally, the ACE items have been found to be highly interrelated (Baglivio & Epps, 2015) and show good test-retest reliability (Dube et al., 2004).

Substance Use History

To become familiar with participants' experience with substance use in childhood and adolescence, participants were asked 14 questions about their history with alcohol and drug use.

These questions included whether or not they had used alcohol/drugs prior to age 18, the frequency of their use, the age at which they began using, the timeframe of their use relative to foster care placements, what type(s) of substances they used, and whether they had a substance use diagnosis during childhood or adolescence (Appendix G).

Mental Health History

In addition to substance use diagnoses, participants were also asked three questions about any other mental health diagnoses they may have had during childhood and adolescence. Specifically, they were asked whether they had a mental health diagnosis prior to age 18, what the diagnosis (or diagnoses) was, and how old they were at the time of their first diagnosis (Appendix H).

History and Experience in the Education System

In order to understand participants' experience in the educational system, participants were asked a series of 12 questions regarding their education and experience in the educational system. Specifically, participants were asked about their highest level of education, out-of-school status, including suspension, expulsion, or truancy (and frequency of truancy) from school, and perceptions of their time in the educational system including difficulty passing classes, difficulty paying attention, difficulty staying out of trouble, and overall perceived experience. (Appendix I).

To measure participants' overall experience in the education system, participants were asked to rate their difficulty paying attention in class, their difficulty passing classes, the frequency of which they were in trouble in school, and their overall experience in school, on 7-point Likert scales. The sum of the scales was then computed to obtain an overall experience score and the Cronbach's alpha was obtained to check the reliability of the measure. The

Cronbach's alpha was .81, which indicates that the reliability of the 'experiences in the education system' item was good.

Parental Bonding Instrument (PBI)

Participants' social bonding and attachment with their biological parents were measured using the Parental Bonding Instrument (PBI) (Parker et al., 1979) (Appendix J). The PBI was designed to measure an adults' retrospective perception of their mother and father separately on three separate domains, 'care', 'control', and 'overprotection'. Based on the participants' ratings in the three domains, care and protection scores were generated for each of the three domains. Additionally, parents were assigned to one of four 'Parental Bonding Quadrants': 1) 'affectionate constraint', which is characteristic of high care and high protection scores, 2) 'affectionless control', which is characteristic of high protection and low care scores, 3) 'neglectful parenting', which is characteristic of low care and low protection scores, and 4) 'optimal parenting', which is characteristic of high care and low protection scores. The authors of the PBI have found that the measure has both good internal consistency and test-retest reliability (Parker et al., 1979). Furthermore, a meta-analysis examining 29 attachment measurement instruments found that the PBI was among the 11 most widely used, valid and reliable instruments. Of these 11 instruments, the PBI was one of the only measures intended for use with adults to measure parent-child relationships (Ravitz et al., 2010).

The Parental Bonding Instrument was used to classify participants into 1 of 4 parental bonding Quadrants. Scores were first calculated for 'care' and 'overprotection' for both the biological mother and any one other prominent caregiver in the participants' lives. Participants answered 25 questions (repeated for each caregiver) related to their parental figure's actions and attitudes toward them. Participants with care scores equal to or above the threshold of 25.5 and

equal to or above the overprotection threshold of 13, were classified under the Affectionate Control category, participants with care scores below 25.5 and overprotection scores equal to or above 13 were classified under the Affectionless Control category, participants with care scores equal to or above 25.5 and overprotection scores below 13, were classified under the Optimal Parenting category, and participants with care scores below 25.5 and overprotection scores below 13 were classified under the Neglectful Parenting category. Additionally, Cronbach's alphas were calculated to determine the reliability of each category (overprotection and care) of the PBI quadrants. The Cronbach's alphas for the mother PBI measure were .86 for care and .56 for overprotection. The alphas for the other parental figure PBI measure were .84 for care and .75 for overprotection. The reliability of the care measure for the mother and the other parental figure are good and the measure for overprotection of the other parental figure is acceptable, however, the reliability of the overprotection measure for the mother is poor.

Brief HEXACO

To measure personality traits which may be associated with offending behaviour, the Brief HEXACO Inventory (BHI) was used (de Vries, 2013) (Appendix K). The BHI is a 24-item scale which measures six domains of personality: Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness. The BHI has been found to have relatively low internal consistency, it has good validity, and comparable inter-rater and test-retest reliability to other established personality measures (de Vries, 2013).

The Cronbach's alphas for corresponding items for each category of the BHI were obtained to check the reliability of the measure. Each category of the BHI was then scored. The Cronbach's alphas were .37 for the honesty-humility measure, -.27 for the emotionality measure, .12 for the extraversion measure, .02 for the agreeableness measure, .24 for the conscientiousness

measure, and .34 for the openness measure. All of these alpha scores are well below the threshold for acceptable reliability. Upon a closer look at participants answers to the BHI questions, there is evidence of a response set, that is, participants seemed to respond to the BHI items in a pattern (for example, answering “strongly agree” for all items). This may be due to fatigue, considering the BHI was near the end of the survey. Because these reliability scores were so low, the research team decided not to conduct analyses related to the BHI.

Social Supports

To understand whether each participant had any social supports present outside of their original family and foster care placements during childhood and adolescence, participants were presented with a questionnaire asking them about positive role models, positive peer groups, and membership to social groups such as clubs or teams (Appendix L). Specifically, participants were asked whether or not these social supports were present and to rate on a 7-point Likert scale the extent to which the words kind, emotionally supportive, comforting, empathetic, described these people/groups in their opinion.

Procedure

Participants were recruited through advertisements posted to various social media platforms including Twitter, Facebook, and Reddit. The advertisement informed potential participants that we were looking for Canadian women who had been placed in Foster Care at any point in their lifetime to participate in our research. The poster stated that our goal is to identify the harmful and helpful factors associated with the Foster Care System in the context of offending behaviour. Potential participants were informed that the surveys would be conducted online, they would take approximately 45 minutes to complete, and that compensation of \$10.00 would be available for participating. Potential participants were also informed that the surveys

would touch on some sensitive topics which may be uncomfortable or upsetting for some people, including childhood trauma, history in the criminal justice system and foster care system, family relationships, history of substance use, and mental health history (Informed Consent and Feedback forms can be seen in Appendices A and B).

Individuals who accepted the invitation to participate in the study could do so on their own time by clicking on the link provided in the recruitment advertisement or sent to them by a member of the research team upon request. Clicking the link brought participants to Qualtrics where they first viewed the informed consent form which informed them of the purpose and goals of the study, as well as the risks and benefits involved, how to obtain compensation and what to expect from the surveys. Participants were informed that they did not have to answer any questions and could skip past any that they did not feel comfortable answering. They were also assured that they could withdraw from the study at any time without penalty.

Upon agreeing to participate, participants were first presented with the demographics survey, followed by the offence history survey, the foster care history survey, the ACE Questionnaire, the substance use history survey, the mental health survey, the experience and history in the education system survey, the PBI, the Brief HEXACO, and finally the social supports survey.

Throughout the surveys participants could go back and forth between questions and were not forced to answer any questions except for the eligibility questions: “Are you a Canadian citizen?” and, “Have you spent any period of your life in foster care?”. Participants were not required to answer the question on gender identity to avoid making participants feel uncomfortable, however participants who did not answer this question were not included in the data analysis. Participants who answered ‘no’ to the two forced answer eligibility questions or

‘male’ to the gender identity question were directed to a screen that thanked them for their interest in the study and informed them that they were not eligible to participate.

Upon completing the surveys, the participants were then directed to a feedback form which thanked participants for their time, reiterated the goals of the study, provided resources in the event that participants experienced an adverse event as a result of participating in the study, and instructed participants on how to receive their compensation. Following the consent form participants were directed to a link to an additional survey which collected their email address (so their contact information could not be connected to their answers) and their compensation preference (\$10 Amazon gift card or \$10 Wal-Mart gift card). Each participant was sent their preferred form of compensation to the email address they provided.

Data Analysis

Participants who progressed less than 17% of the way through the set of surveys (i.e., did not get to the History in FC survey, who completed the survey but spent less than 100 seconds doing so, who provided contradictory information, or who requested their data be withdrawn were deleted from the data set. One participant was also deleted because they seemed to misunderstand multiple questions. Data was coded as missing if participants did not answer a unit of time for time-based answers (i.e., time spent in care), or if participants’ answers did not make sense given the question that was asked. Listwise deletion was used to handle missing data.

Preliminary Analysis

A preliminary data analysis was run to examine how the two groups differed on demographic information and reason for entry into the foster care system. Participants’ age was compared using an independent *t*-test, and participants ethnicity and reason for entry into foster care were compared using chi-square tests of independence.

Hypothesis 1.1 – 1.4

The first set of hypotheses predicted that the criminalized group would experience more ACEs than the non-criminalized group. Participants' overall ACE scores were obtained by calculating the sum of the ACEs participants reported experiencing. Participants responded either "yes, I have experienced this" or "no, I have not experienced this" coded as 1 or 0 respectively for each of the 10 ACEs. Mean ACE scores were then compared between the criminalized and non-criminalized groups using an independent *t*-test. The presence of each of the ACEs individually in each group were then looked at separately using chi-square tests of independence.

Hypothesis 2.1 – 2.4

The second set of hypotheses predicted that the criminalized group would be more likely than the non-criminalized group to experience poor parenting styles and lack of social closeness with family, foster caregiver, and people outside of the family. Closeness to biological family members and members in foster care placements were measured by asking participants to rate their closeness to individuals in their family and foster care placements separately on 7-point Likert scales, with 1 being not at all close, and 7 being very close. Specifically, participants were asked to rate the biological family member they felt closest to as well as the members from up to 5 foster care placements who they felt closest to. Group means for closeness to biological family members, closeness to foster care members, and difficulty making and maintaining social bonds were each compared using independent samples *t*-tests.

The Parental Bonding Instrument was used to classify participants into 1 of 4 parental bonding quadrants; Affectionate Control category, Affectionless Control, Optimal Parenting category, and Neglectful Parenting. Membership to the quadrants was compared between groups for both the biological mother and other caregiver using the chi-square test of independence.

Hypothesis 3.1 – 3.3

The third set of hypotheses predicted that criminalized women would be more likely than non-criminalized women to have spent time in residential care, to have become involved in foster care at an older age, and to have had more placement changes. To compare criminalized and non-criminalized groups on whether they had spent any time in residential care, a chi-square test of independence was used.

Independent samples *t*-tests were used to compare group means on the age at which they first entered foster care as well as the number of placement changes they had experienced during their time in foster care.

Hypothesis 4.1 – 4.6

The fourth set of hypotheses predicted that the criminalized group would be more likely than the non-criminalized group to report substance use, academic difficulties, and mental health diagnoses. Chi-square tests of independence were used to compare groups on whether they used alcohol or drugs prior to age 18, whether they had any mental health diagnoses before age 18, and whether they had ever been suspended or expelled from school.

To compare the highest level of education completed between groups, education level was coded as follows: Having no formal education, having completed some elementary, completed elementary or some junior high, completed junior high or some high school, having a high school diploma or GED, and having any post secondary education. Because this type of data has a clear rank, but each rank does not have a clear value (i.e., the difference between each rank is not necessarily equal), the non-parametric, Mann-Whitney U test was then used to compare the distribution of education level between groups as opposed to a *t*-test.

Truancy was measured by asking participants approximately how many days per month on average they skipped classes while in school. To compare the truancy means between the criminalized and non-criminalized groups an independent samples *t*-test was used.

Hypothesis 5.1 – 5.3

The fifth set of hypotheses addressed protective factors which may mitigate risks of offending. These hypotheses predicted that non-criminalized women would be more likely than criminalized women to score low on emotionality and extraversion, but high on honesty-humility, agreeableness, and conscientiousness, and to report having a support person or group in their life. Chi-square tests of independence were used to compare the presence of role models, pro-social friend groups, and membership to clubs, teams, or other social groups. In addition, post-hoc analyses comparing participants' ratings of the positive characteristics of these social supports were run using independent samples *t*-tests. Participants' ratings for their role model were calculated by finding the sum of each of the 4 Likert scales rating how kind, supportive, comforting, and empathetic they felt their role model was. Participants' ratings for their friend group were calculated by finding the sum of each of the 4 Likert scale ratings for how kind, supportive, comforting, and empathetic they felt their friend group was. And finally, Participants' ratings for their other social group were calculated by finding the sum of each of the 4 Likert scale ratings for how involved, included, supported, and understood their group made them feel.

Results

Preliminary Analysis

Results from the preliminary analysis showed that there was no significant difference between the ages of criminalized women ($M = 29.02, SD = 7.87$) and non-criminalized women

($M = 27.97$, $SD = 8.19$) in our sample $t(154) = .74$, $p = .474$, bCI [-1.74, 3.84]. There were also no significant differences in ethnicity between the two groups. Note that only the three most common ethnicities were analyzed because there were so few people who identified as other ethnicities. Results from the chi-square analysis comparing ethnicities in shown in Table 3.

Table 3

Group Differences in Ethnicity.

	Criminalized (% (n))	Non-Criminalized (% (n))
White ($N = 170$)	83.7(41)	76.9(93)
Indigenous ($N = 13$)	64.1(25)	56.5(52)
Black ($N = 15$)	4.1(2)	10.7(13)

Note. All differences nonsignificant.

Results from the chi-square analysis comparing the groups on their reasons for entering the foster care system found that criminalized women reported having been placed in foster care due to domestic violence occurring within the home more often than non-criminalized women. However, the two groups did not differ in terms of other reasons for entry into the foster care system. Results from the chi-square analysis comparing reasons for entry in shown in Table 4.

Table 4*Reasons for Entry into the Foster Care System by group.*

	Criminalized (% (n))	Non-criminalized (%(n))
Abuse ($N = 23$)	18.4 (9)	11.6 (14)
Death of caregiver ($N = 33$)	10.2 (5)	23.1 (28)
Domestic violence** ($N = 27$)	28.6 (14)	10.7 (13)
Incarceration of caregiver ($N = 10$)	6.1 (3)	5.8 (7)
Mental/physical illness of caregiver ($N = 19$)	16.3 (8)	9.1 (11)
Neglect ($N = 46$)	18.4 (9)	30.6 (37)
Parental substance abuse ($N = 8$)	4.1 (2)	5.0 (6)
Poverty ($N = 82$)	51.0 (25)	47.1 (57)
Special needs not being met ($N = 1$)	2.0 (1)	-
Other ($N = 1$)	2.0 (1)	-

Note. * $p < .05$, ** $p < .01$. *** $p < .001$

Hypotheses 1.1 – 1.4

Participants' ACE scores ranged from 0 to 10, $M = 3.81$, $SD = 3.33$. The most commonly experienced ACEs among the sample were emotional neglect (47.4%), and parental separation or divorce (40.6%). The complete distribution of ACE scores, including where participants were living when they experienced the ACEs, is shown in Table 5.

Table 5*Distribution of ACE Scores (N = 143)*

	Total	Where Participants Experienced the ACE (% (n))		
		Original Family	Foster Family	Group Home
Emotional Abuse	36.6 (64)	46.9 (30)	45.3 (29)	12.5 (8)
Physical Abuse	37.1 (65)	44.6 (29)	43.1 (28)	18.5 (12)
Sexual Abuse	17.7 (31)	29.0 (9)	71.0 (22)	9.7 (3)
Emotional Neglect	47.4 (83)	36.1 (30)	53.0 (44)	15.7 (13)
Physical Neglect	32.0 (56)	39.3 (22)	55.4 (31)	14.3 (8)
Parental Separation	40.6 (71)	-	-	-
Household Violence	25.7 (45)	40 (18)	51.1 (23)	17.7 (8)
Household Substance Abuse	26.3 (46)	34.8 (16)	47.8 (22)	21.7 (10)
Household Mental Illness	26.3 (46)	32.6 (15)	45.7 (21)	28.3 (13)
Incarceration of a Household Member	25.7 (45)	44.4 (20)	37.8 (17)	20.0 (9)

Note. Experience of ACEs is not mutually exclusive. Where participants experienced ACEs is not mutually exclusive. Percentages of where participants experienced each ACE are calculated from those who experienced each ACE, not from the sample as a whole. It is important to note that only 27 of the 175 participants had been placed in group homes.

Hypothesis 1.1, which stated that compared to non-criminalized women, criminalized women were expected to report having a higher number of ACEs overall, was supported. An independent samples *t*-test with bootstrapping, indicated that criminalized women experienced

significantly more ACEs $M = 5.05$, $SD = 3.31$, than non-criminalized women $M = 3.26$, $SD = 3.26$, $t(138) = 2.94$, $p = .007$, $bCI [.67, 3.03]$, with a medium effect $d = .55$.

Results from chi-square analyses supported hypothesis 1.2, which stated that compared to non-criminalized women, criminalized women would be more likely to report having experienced some form of abuse during childhood, and hypothesis 1.3, that compared to non-criminalized women, criminalized women would be more likely to report having experienced some form of neglect during childhood. However, the chi-square analysis results did not support hypothesis 1.4, that compared to non-criminalized women, criminalized women were expected to be more likely to report having had at least one parent who was incarcerated during their childhood. Specifically, based on the odds ratios, criminalized women were 1.61 times more likely to have experienced some form of abuse ($\chi^2(1) = 3.97$, $p = .046$), and 1.70 times more likely to have experienced some form of neglect than non-criminalized women ($\chi^2(1) = 5.09$, $p = .024$). However, there was no significant difference between the rates at which criminalized and non-criminalized women experienced parental incarceration ($\chi^2(1) = .03$, $p = .858$). Proportions of participants who reported abuse, neglect and parental incarceration are shown in Table 6.

Table 6

Proportions of Participants who Experienced Abuse, Neglect, and Parental Incarceration (N = 175).

	Criminalized (% (n))	Non-Criminalized (% (n))
Abuse Total* (N = 142)	45.2 (19)	28.0 (28)
Physical Abuse*** (N = 142)	66.7 (28)	33.0 (33)
Emotional Abuse (N = 142)	47.6 (20)	40.0 (40)
Sexual Abuse (N = 141)	19.0 (8)	22.2 (22)
Neglect Total* (N = 142)	47.6 (20)	28.0 (28)
Physical Neglect (N = 142)	54.8 (23)	32.0 (32)
Emotional Neglect* (N = 142)	66.7 (28)	51.0 (51)
Parental Incarceration (N = 36)	76.5 (13)	78.9 (15)

Note. * $p < .05$, ** $p < .01$. *** $p < .001$

Hypothesis 2.1 – 2.4

Hypothesis 2.1, which stated that compared to non-criminalized women, criminalized women would report less social closeness with any biological family member, hypothesis 2.2, which stated that compared to non-criminalized women, criminalized women would report less social closeness with any foster caregiver, and hypothesis 2.3, which stated that compared to non-criminalized women, criminalized women would be more likely to report that they had trouble making and keeping social bonds with people outside of their family during the time they were in foster care, were not supported by independent samples t -tests with bootstrapping. The t -tests showed that there was no significant difference between criminalized and non-criminalized

women's social closeness with biological family members, $t(98) = 0.35$, $p = 0.300$, bCI [-.53, .76], with a very small effect, $d = .07$, or foster care caregivers, $t(152) = -.91$, $p = 0.852$ bCI [-.80, .30], with a very small, negative effect, $d = -.16$. Nor was there a significant difference between criminalized and non-criminalized women's reported difficulty making and maintaining social bonds outside of the home, $t(150) = 0.49$, $p = 0.634$ bCI [-1.29, 2.14], with a very small effect, $d = .09$. Means and standard deviations for social bond variables are shown in Table 7.

Table 7

Means and Standard Deviations of Social Bond Measures for Criminalized and Non-Criminalized Participants.

	Criminalized		Non-Criminalized	
	M	SD	M	SD
Social Bonds with Biological Family Members ($N = 100$)	4.43	1.68	4.32	1.51
Social Bonds with Foster Care Caregivers ($N = 154$)	4.21	1.56	3.95	1.53
Difficulty Making & Maintaining Social Bonds ($N = 153$)	14.98	5.53	14.56	4.56

Note. All differences nonsignificant.

Hypothesis 2.4, which stated that compared to non-criminalized women, criminalized women would have experienced poorer parenting styles from their biological mother and/or other primary caregiver with their biological parents, was not supported. Specifically, criminalized women were not significantly more likely to have experienced any of the four categories of parenting styles than non-criminalized women in terms of their biological mother's parenting style, $\chi^2(2) = 3.63$, $p = .163$, or the parenting style of another prominent parental figure

in their life, $\chi^2(1) = 0.10, p = .757$. Proportions of participants in each parenting style are shown in Table 8.

Table 8

Proportions of Participants in each Parenting Style.

	Criminalized (% (n))	Non-Criminalized (% (n))
Biological Mother (<i>N</i> = 101)		
Affectionate Constraint	23.5 (4)	7.3 (3)
Affectionless Control	76.5 (13)	87.8 (36)
Optimal Parenting	0.0 (0)	4.9 (2)
Neglectful Parenting	0.0 (0)	0.0 (0)
Other Parental Figure (<i>N</i> = 86)		
Affectionate Constraint	5.9 (1)	3.8 (1)
Affectionless Control	94.1 (16)	96.2 (25)
Optimal Parenting	0.0 (0)	0.0 (0)
Neglectful Parenting	0.0 (0)	0.0 (0)

Note. All differences nonsignificant.

Hypothesis 3.1 – 3.3

Hypothesis 3.1, which stated that compared to non-criminalized women, criminalized women would be more likely to have spent time in group homes or institutions, was not supported. According to chi-square crosstabulations, 21.3% of criminalized women reported

having spent time in institutional care compared to 47.3% of non-criminalized women. This difference was not significant $\chi^2(1) = 1.18, p = .277$.

Hypothesis 3.2, which stated that compared to non-criminalized women, criminalized women were expected to have become involved in foster care at an older age, and hypothesis 3.3, which stated that compared to non-criminalized women, criminalized women would have had more placement changes, were not supported by independent samples *t*-tests with bootstrapping. The *t*-tests showed that there was no significant difference between criminalized and non-criminalized women's age at the time they entered foster care, $t(155) = 0.741, p = 0.417$, bCI [-1.18, 1.78], with a very small effect, $d = .08$, nor was there a significant difference between the number of placement changes experienced by criminalized and non-criminalized women, $t(154) = .768, p = 0.397$ bCI [-.287, .6345], with a small effect, $d = .14$. Means and standard deviations for age at first placement and number of placement changes are shown in Table 9.

Table 9

Means and Standard Deviations of Age at First Placement and Placement Changes for Criminalized and Non-Criminalized Participants.

	Criminalized		Non-Criminalized	
	M	SD	M	SD
Age at First Placement ($N = 157$)	9.67	4.68	9.35	3.51
Number of Placement Changes ($N = 155$)	0.80	1.32	0.62	1.32

Note. All differences nonsignificant.

Hypotheses 4.1 – 4.6

Hypothesis 4.1, which stated that compared to non-criminalized women, criminalized women were expected to be more likely to report using substances during their childhood, was supported by chi-square analysis results. Based on the odds ratio, criminalized women were 1.70 times more likely than non-criminalized women to have used alcohol before age 18. This difference was significant, $\chi^2(1) = 15.94, p < .001$. However, criminalized women were not significantly more likely than non-criminalized women to use recreational drugs before the age of 18, $\chi^2(1) = 2.07, p = .150$. Proportions of participants who reported substance use prior to age 18 are shown in Table 10.

Table 10

Proportions of Participants who Reported the Use of Substances Prior to Age 18.

	Criminalized (% (n))	Non-Criminalized (% (n))
Alcohol Use*** (N = 146)	85.7 (36)	50.0 (52)
Drug Use (N = 145)	26.8 (11)	16.3 (17)

Note. * $p < .05$, ** $p < .01$. *** $p < .001$

Hypothesis 4.2, which stated that compared to non-criminalized women, criminalized women were expected to be more likely to report having been suspended or expelled from school, was partially supported by chi-square analysis results. Based on the odds ratio, criminalized women were 2.4 times more likely than non-criminalized women to have been suspended from school. This difference was significant, $\chi^2(1) = 11.60, p < .001$. However, criminalized women were not significantly more likely than non-criminalized women to have been expelled from school, $\chi^2(1)$

= 0.66, $p = .416$. Proportions of participants who reported suspension and expulsion prior to age 18 are shown in Table 11.

Table 11

Proportions of Participants Reporting Suspension and Expulsion Prior to Age 18.

	Criminalized (% (n))	Non-Criminalized (% (n))
Suspension*** ($N = 140$)	50.0 (20)	21.0 (21)
Expulsion ($N = 138$)	17.5 (7)	12.2 (12)

Note. * $p < .05$, ** $p < .01$. *** $p < .001$

Hypothesis 4.3, which stated that compared to non-criminalized women, criminalized women were expected to report a lower level of education completed, was not supported by the results of a Mann-Whitney U test. The highest level of education completed by criminalized women ($Mdn = 7$ (high school diploma)) was slightly lower than the highest level of education completed of the non-criminalized women ($Mdn = 7.5$ (between high school diploma and some post secondary)). However, the Mann-Whitney U test indicated that this difference was not significant $U(N_{\text{crim}} = 42, N_{\text{noncrim}} = 99) = 1738.00, z = -1.64, p = .100$

Hypothesis 4.4, which stated that compared to non-criminalized women, criminalized women were expected to be more likely to report having skipped classes frequently, was supported. An independent samples t -test with bootstrapping indicated that the criminalized women skipped significantly more classes per month $M = 5.63, SD = 7.75$, than the non-criminalized women in the sample $M = 1.93, SD = 3.71, t(133) = 3.74, p = .010, bCI [1.13, 6.20]$, with a medium effect $d = .71$.

Hypothesis 4.5, which stated that compared to non-criminalized women, criminalized women would be more likely to report having had a negative experience in the educational system, was supported. An independent samples *t*-test with bootstrapping indicated that the criminalized women reported having a more negative experience in the education system overall $M = 15.17$, $SD = 3.84$, than the criminalized women in the sample $M = 17.60$, $SD = 3.43$, $t(125) = -3.45$, $p = .002$, bCI [-3.88, -1.10], with a medium effect $d = .69$.

Hypothesis 4.6, which stated that compared to non-criminalized women, criminalized women were expected to be more likely to report having a mental health diagnosis in childhood, was not supported. According to chi-square crosstabulations, 44.1% of criminalized women reported having a mental health diagnosis prior to age 18 compared to 27.3% of non-criminalized women. This difference was not significant $\chi^2(1) = 3.20$, $p = .074$.

Hypothesis 5.1 – 5.3

Hypothesis 5.3, which stated that compared to criminalized women, non-criminalized women would be more likely to report having a support person or group in their life, was not supported. Specifically, non-criminalized women were not significantly more likely to have reported having a positive role model, $\chi^2(1) = .08$, $p = .777$, a friend group which they enjoyed spending time with, $\chi^2(1) = .65$, $p = .420$, or having been a member of an organized social group, $\chi^2(1) = .001$, $p = .979$. Proportions of participants reporting the presence of social supports are shown in Table 12.

Table 12*Group Differences in Presence of Social Supports.*

	Criminalized (% (n))	Non-Criminalized (% (n))
Role Model ($N = 133$)	57.5(23)	54.8(51)
Friend Group ($N = 131$)	64.1(25)	56.5(52)
Organized Social Group ($N = 123$)	35.1(13)	34.9(30)

Note. All differences nonsignificant.

Although there was no significant difference in the presence of social supports between criminalized and non-criminalized women, further, post-hoc analysis of the participants' ratings of the positive social attributes (i.e. kindness, empathy, supportiveness) of their social supports revealed that non-criminalized women rated their role model more positively than the criminalized women in the sample, $t(33) = -2.55$, $p = .025$, bCI [-8.40, -.69], with a large effect $d = .93$, as well as their friend group, $t(33) = -2.26$, $p = .028$, bCI [-8.19, .01], with a large effect $d = .82$. However, there was not a significant difference in how criminalized and non-criminalized women rated the organized social groups they were involved in, $t(33) = -1.93$, $p = 0.051$ bCI [-6.81, .38], with a medium effect, $d = .70$. Means and standard deviations for participants' ratings of their social supports are reported in Table 13.

When asked why they provided the ratings they did for their role models, many of the women who rated their role models positively said they did so because they felt this person cared about them and their well-being, treated them well (e.g., with kindness, respect), and/or they felt this person was always there for them. When asked why they provided the ratings they did for their friend groups, many of the women who provided more positive ratings said they did so

because their friends made them feel positive emotions (e.g., happy, warm, supported) and/or because they felt their friend group was “like a family”. However, those who rated their friend group less positively tended to describe that they felt lonely and felt that their friends were not there for them during hard times. Few of the participants opted to explain why they provided the ratings they did for other social groups they were involved in, however those that did described that they rated their group positively because they felt respected and enjoyed being involved in a community that shared their interests. One person who rated their group less positively said “I was the black sheep and "bad kid" with a bunch of people who did not have similar life experiences as me.”

Table 13

Means and Standard Deviations for Criminalized and Non-Criminalized Participants' Ratings of Positive Social Attributes of Their Social Supports

	Criminalized		Non-Criminalized	
	M	SD	M	SD
Role Model* (<i>N</i> = 68)	14.91	5.09	19.67	5.15
Friend Group* (<i>N</i> = 70)	14.45	5.15	19.00	5.63
Organized Social Group (<i>N</i> = 43)	13.82	4.49	17.42	5.38

Note. * $p < .05$, ** $p < .01$. *** $p < .001$

Discussion

The main goal of the current study was to develop an understanding of how women's experiences in the foster care system may relate to criminality and address gaps in the previous

literature by comparing the experiences of criminalized and non-criminalized foster care-involved women. Specifically, this study identified and compared the ACEs of each group, their experiences with making and maintaining social bonds both inside and outside of their biological and foster families, the characteristics of their placement(s), and difficulties they may have experienced during the time they were involved with the foster care system, including substance use, mental illness, and difficulties in the education system. Additionally, this study explored the protective factors which participants from each group experienced, including the presence of social supports and protective factors related to personality. Through exploring the differences in these experiences between criminalized and non-criminalized women, this study aimed to address specifically what aspects related to foster care may be associated with the criminalization of women.

Averse Childhood Experiences (ACEs)

As expected, results showed that criminalized women reported having experienced a higher number of ACEs overall than non-criminalized women. This finding is in line with previous literature looking at ACEs in criminalized populations. It is well documented that criminalized populations tend to experience more adverse events during their childhood than non-criminalized populations (Baglivio et al., 2015; Fox et al., 2015). Based on the results of the current study, it seems this is also true for individuals who are placed in foster care; those who experience more trauma or adversities may be more likely to commit offences later in life. Additionally, it was expected that the current study would find that criminalized women would be more likely to have reported experiencing any form of abuse, any form of neglect, and/or parental incarceration, than non-criminalized women. This expectation was based on previous literature, which states children in care who offend tend to specifically experience higher rates of

parental incarceration (Hayden & Graves, 2018), as well as literature which states neglect, abuse, and parental incarceration are all good predictors of CPS intervention (Asscher et al., 2015; Barrett et al., 2015; Haapasalo, 2000; Hayden & Graves, 2018; Marquis et al., 2008). Study results indicated that criminalized women did report higher rates of abuse and neglect, specifically physical abuse and emotional neglect, than non-criminalized women. However, both criminalized and non-criminalized groups experienced similar rates of parental incarceration. Findings surrounding parental incarceration contradict what has been reported in literature looking at non-foster care involved populations, however, it is possible that the reason for this is because a fairly large portion (over 70%) of both the criminalized and non-criminalized groups in this study's sample experienced parental incarceration. Based on these results, it seems that having one or both parents incarcerated is a relatively common experience for children in care. Perhaps the association between parental incarceration and offending is being mitigated by CPS involvement for some individuals in foster care and not for others. Further research on parental incarceration in foster care involved populations may shed some light on this.

Social Bonds

It was expected that criminalized women would report feeling less close with any biological or foster care family member than the non-criminalized women in the sample. However, this expectation was not supported by the study findings. According to literature on social bonding in children in care, being separated from their families at a young age may often cause interruptions in social bonding, which in turn can have a negative impact on the children as they grow up (Mäki et al., 2003; McMahon & Fields, 2015). It has also been found that having poor or interrupted social bonds with caregivers is associated with offending behaviour later in life (Chan & Chui, 2015; Mäki et al., 2003; Schroeder et al., 2010). In the present study's

sample, both criminalized and non-criminalized groups reported similar feelings of closeness to biological and foster care family members. With no basis of comparison to a population which was not involved in foster care, it is difficult to say whether individuals in foster care tend to feel less close to caregivers than individuals who were not involved in foster care.

It was also expected that criminalized women would be more likely to report having trouble making and keeping social bonds with people outside of their family during the time they were in foster care. This hypothesis was also not supported by the findings of this study. Considering there was little difference between the social bonds each group felt within their families and foster care placements, it makes sense that they would also experience similar difficulties with social bonds outside of the family, given these bonds may be influenced by similar factors (i.e., placement changes). However, like the bonds with caregivers, it is difficult to say whether the foster care involved individuals in our study had greater difficulties making and maintaining social bonds than their peers, with no basis of comparison to a non-foster care involved group.

Looking further into social bonding with caregivers, it was expected that criminalized women would have experienced poorer parenting styles from their biological mother and/or another primary caregiver. Contrary to what was expected, both groups tended to fall into the affectionless control category for both caregivers. Although this does not fit with what the previous literature has found regarding parent-child relationships and offending (Chan & Chui, 2015; McMahon & Fields, 2015; Schroeder et al., 2010), it does make sense for our sample considering the previously discussed finding that both criminalized and non-criminalized women reported similar levels of closeness to biological and foster care family members. These findings indicate that children in care, regardless of whether they become criminalized as they grow up,

tend to receive limited affection from their caregivers and experience a high level of control. This parenting style, according to Parker et al. (1979), is not optimal for children's development. Given that both groups tended to experience poor parental bonding, perhaps those from the non-criminalized group were experiencing other factors which mitigated the risks associated with poor parental bonding.

Placement Characteristics

Given that it was expected that criminalized women would report less feelings of closeness to foster care caregivers, it was expected that this correlation could be explained by placement changes. Specifically, it was expected that criminalized women would report having experienced more placement changes than non-criminalized women. The results from this study did not support this expectation; the criminalized portion of our sample did not report any more placement changes than the non-criminalized portion. Although the hypothesis was not supported, this finding does offer some explanation as to why both groups felt similar levels of closeness to their foster caregivers. Considering the speculation that lack of closeness to caregivers could be explained by having multiple placement changes, perhaps the participants in our sample felt similar levels of closeness to caregivers because the majority of them, from both groups, had not experienced any placement changes. However, this does not explain why this study does not support previous findings that poor social bonds and placement changes are an important predictor of criminality in foster care-involved individuals (Haapasalo, 2000; Hayden & Graves, 2018; Ryan et al., 2007a; Yoon et al., 2018).

Previous literature on offending in foster care-involved populations has found that placement in residential care, such as group homes or institutions is associated with higher rates of offending than placement with a foster family (Haapasalo, 2000; Yoon et al., 2018). However,

results from this study found no significant difference between the proportion of criminalized and non-criminalized women who had spent time in residential placements. It is unclear why the findings from this study are inconsistent with the findings of previous studies looking at this association. Perhaps this may be due to differences in the standard of care in residential placements in Canada compared to in the United States, where the majority of the previous studies were conducted. However, with no direct comparisons between the standard of care in the United States and Canada, this theory is purely speculative.

It was also expected that criminalized women would report having become involved in foster care at an older age than non-criminalized women. The results from this study, however, showed that both criminalized and non-criminalized women entered foster care around the same ages, around 9 years old on average. According to previous literature, foster care-involved youth who offend tend to have their first placement around age 13, and those who do not offend typically experience their first placement at a younger age. Other authors speculate that this correlation may be due to the fact that children who are placed at an older age had to endure trauma occurring in the home for a longer period of time (Haapasalo, 2000; Yoon et al., 2018). The current study's result surrounding ACEs support this speculation; however, these results looking at age at first placement do not support the hypothesis that children who offend are placed at an older age. Perhaps the severity and frequency of the trauma are more relevant than when trauma intervention (i.e., foster care placement) takes place. This may explain the discrepancy between the results from this and previous studies.

Substance Use, Academic Difficulties, and Mental Health

Based on previous literature examining patterns of substance use in criminalized and non-criminalized populations, it was expected that criminalized women would be more likely than

non-criminalized women to report having used drugs and alcohol prior to age 18. This hypothesis was only partially supported. Criminalized women were 1.70 times more likely than non-criminalized women to have used alcohol prior to age 18. However, contradictory to previous literature, which states that criminalized populations are more likely to have used recreational drugs at a young age (D'Amico et al., 2008), as well as literature which found that this correlation is also present in foster-care populations (Hayden & Graves, 2018; McMahon & Fields, 2015), both criminalized and non-criminalized women in our sample reported similarly low rates (under 30%) of recreational drug use prior to age 18. The discrepancy between findings related to drug use between this and other studies may be explained by the period during which drug use seems to impact offending behaviour. According to Hayden and Graves (2018), drug use was only a significant predictor of offending behaviour during the time the participants were in foster care, but not during the period after they left foster care. Considering the average age at first arrest for our sample was 18.96, above the age at which a person can legally leave foster care (CSFA, 1990), many of the participants from our sample may have committed their offences during a time when they were not in foster care. Drug use may not have had an impact on their offending behaviour for this reason based on the findings from Hayden and Graves (2018).

The expectation that non-criminalized women, compared to criminalized women would be more likely to report having been suspended or expelled from school was also only partially supported. The current study found that criminalized women were 2.4 times more likely than non-criminalized women to have been suspended from school. However, a similarly low proportion (under 20%) of both criminalized and non-criminalized women reported having been expelled from school. This finding generally fits with previous literature, which suggests that criminalized populations as well as children in care tend to experience academic difficulties,

including out-of-school status due to behavioural problems (McMahon & Fields, 2015; Ryan et al., 2007a). The finding that both groups experience low rates of expulsion may be explained by the fact that expulsion is typically used as a more severe form of behaviour management which is utilized much less frequently than suspension and likely is reserved for very extreme cases.

Another reason that children may have out-of-school status is truancy. Because out-of-school status has been connected to offending behaviour (McMahon & Fields, 2015; Ryan et al., 2007a) it was expected that criminalized women would report having skipped classes more frequently than non-criminalized women. Study findings supported this prediction. Criminalized women in our sample reported skipping classes 11.89 days per month on average, while non-criminalized women reported skipping classes 6.93 days per month on average. Based on these findings, suspension and truancy, but not expulsion could further explain the link between out-of-school status and offending behaviour for women who have been involved in foster care.

In addition to having behavioural difficulties in school, previous literature suggests that criminalized populations as well as children in care, tend to have lower overall academic attainment (usually less than high school completion) than non-criminalized populations and children with no foster care involvement (Mersky & Janczewski, 2013). Based on these findings, it was expected that the present study would find that criminalized women who had been in foster care would report having completed a relatively small amount of formal education compared to the non-criminalized women who had been in foster care. However, both groups reported having completed similar levels of education. Not only was there virtually no difference between the education levels of the two groups, but both groups also completed more education than what the previous literature would suggest. The median level of education for the criminalized group was a high school diploma, and the median level for the non-criminalized

group was some post-secondary education. This may be because individuals who choose to volunteer to participate in research tend to be more educated than those who do not (Rosenthal & Rosnow, 1975). Furthermore, according to a 2019 demographic study of r/sample size, which was the primary recruiting forum for this study, the majority of the forum's participant pool consists of individuals with a high school education or greater (Unknown Author[u/notation dictation], 2019).

Study results around mental health diagnoses and offending in foster care involved women showed that there was no difference between rates of mental health diagnoses between criminalized and non-criminalized women. This finding was unexpected based on the existing literature which has found that mental illness is associated with offending behaviour, particularly in women (Brown et al., 2018; DeHart et al., 2014; Fazel et al., 2016). Mental health diagnoses were less common among both groups of foster care involved women in our sample than they were in other studies involving a more general population of criminalized individuals. However, studies looking at mental health diagnoses in criminalized populations tend to look at lifetime diagnoses in adults who are currently incarcerated, whereas participants in the present study were not currently incarcerated and were asked only about diagnoses they received prior to age 18. These discrepancies between the present study and other studies examining mental illness in incarcerated populations offers some potential explanation as to why the current study's findings are not consistent with the previous literature. There is evidence that incarcerated individuals may show higher rates of mental illness than individuals who are living in the community (Brown et al., 2018; Canadian Mental Health Association [CMHA], 2021). Furthermore, youth tend to have lower rates of mental health diagnoses than adults (CMHA, 2021). According to the Canadian Mental Health Association (2021), approximately 20% of Canadian youth experience

mental illness. Comparing this to the 44.1% of criminalized women and 27.3% of non-criminalized women who reported having a mental health diagnosis prior to age 18 in our sample, it appears that foster care involved women do have a somewhat higher rate of mental health diagnosis during youth than the general Canadian population. Considering this, although no difference was found between the diagnosis rate of criminalized and non-criminalized women, the relatively high mental health diagnosis rate prior to age 18 for foster care involved women compared to the diagnosis rate of the general population of youth in Canada, is concerning and worth noting.

Protective Factors

It was expected that non-criminalized women would score lower on personality measures of emotionality and extraversion, and higher on measures of honesty-humility, agreeableness, and conscientiousness. According to previous literature, high scores on emotionality and extraversion and low scores on factors similar to honesty-humility, agreeableness and conscientiousness have been found to be protective factors against offending in individuals with a high number of ACEs rates (Becerra-García, 2013; Craig et al., 2017; Jolliffe, 2013; Wiebe, 2004). This hypothesis was not tested because the reliability scores of the Brief HEXACO were very low, therefore the results would not be meaningful.

Lastly, it was expected that non-criminalized women would be more likely than criminalized women to report having a support person or group in their life. The results from this study found no difference in the likelihood that criminalized and non-criminalized women would report having a positive role model or friend group or having been part of an organized social group. However, further analysis showed that non-criminalized women viewed their role models and friend groups as more supportive, empathetic, kind, and comforting than criminalized

women. This is generally in line with previous literature which has identified receiving social and/or emotional support from a person outside of the household as a protective factor against offending for individuals who receive limited support from their caregivers or family members (Mullis et al., 2004). Given that no difference was found between the presence of these support people/groups between criminalized and non-criminalized women, but a difference was identified in how the participants perceived the positive traits of these individuals, perhaps the presence of these people/groups is not as important as their positive qualities when it comes to acting as a protective factor against criminalization. This is in-line with literature examining the effect of peer relationship quality and relationships with antisocial peer groups which has found that lower quality friendships and involvement with antisocial peer groups was associated with antisocial behaviour and poor adjustment in adolescence (Laird, et al., 1999). Furthermore, research from Lansford et al. (2003) has identified positive relationships with peers as a protective factor against behavioural problems for adolescents who have poor relationships with their parents.

Limitations

The present study's sample included 175 Canadians who identified as women and had been involved in foster care at some point during their lifetime. According to a power analysis conducted using G*Power (Faul, et al., 2007) the minimum sample size for this study was 176. We achieved very close to this sample size, therefore statistical power is not a substantial concern for this study. However, only 28% of the sample had a history with the criminal justice system, meaning the criminalized and non-criminalized groups were unequal. Although this is not ideal, the statistical tests used in this study are quite robust against unequal sample sizes. Nevertheless, the statistical power of the tests may be less than if the group sizes were more

equal. A series of post-hoc power analyses revealed that the statistical power of the tests with medium or greater effect sizes, were good (Appendix M - AF). Additionally, some of the questions were not relevant to all of the participants. Specifically, very few participants had ever had a mental health diagnosis prior to the age of 18, had a parent who was incarcerated, filled out the PBI (had their biological mother or other parental figure present during childhood), or rated their perceptions of organized social groups they belonged to. For this reason, the number of participants included in the analyses comparing these variables between the two groups was far below the 176 suggested by the power analysis and greatly lacked statistical power.

Recruitment also created some limitations for this study. The goal for recruitment was to post advertisements on social media platforms; mainly forums for individuals who had been involved in foster care. In doing this we could be fairly certain that all of our participants had actually been involved in foster care at some point during their lifetime. Unfortunately, none of the forum moderators responded to our requests to post recruitment advertisements on their forums. Our primary recruitment platform was the open research forum r/samplesize on Reddit. We also posted the recruitment poster on Facebook and Twitter. With this type of recruitment there is a risk that some participants may not have actually been involved in foster care but said that they had been, so they would qualify for the study and receive the compensation. However, the members of the research team were careful to exclude data from participants that did not make sense (i.e., inconsistencies reported regarding time spent in care, short answers, ages did not make sense, or were inconsistent with other answers). The research team felt confident that the participants included in the final data set were being truthful about their involvement in foster care.

As previously mentioned, the BHI showed very poor Cronbach's alpha reliability scores according to the calculations from the present study, and, according to de Vries (2013), relatively poor internal consistency ratings due to the fact that it is a short scale, which indicates there is poor correlation between the items intended to measure the same constructs. This may be due to participant fatigue, given that the BHI was located at the end of a time-consuming set of surveys and contains a fairly long list of statements, which the participants may have found less interesting or relevant to their experiences than the other surveys. It is possible that participants may have been tired and less focused by the time they reached this set of questions and/or simply less interested in this set of questions. For this reason, the results surrounding personality (i.e., honesty-humility, emotionality, extraversion, agreeableness, conscientiousness, and openness), were not reported. It is possible that the social supports questionnaire may have been subject to the same survey fatigue as the BHI given that it was at the end of the set of surveys. However, after reviewing the participant's answers to the social support measures and considering the reliability scores for these measures were good, the research team felt it was appropriate to analyze and report these results. However, the reliability and validity of the majority of the scales (with the exception of the ACE measure) were a limitation to this study given the lack of evidence supporting the validity and reliability of the scales constructed by the research team and the poor reliability of the mother's overprotection items in the PBI.

Lastly, given than the present study relies solely on self-report data, the standard consequences that apply to self-report data are also present in this study. Specifically, self-preservation bias is a concern for this study especially for questions regarding history in the criminal justice system. It is anticipated that the anonymous nature of this study helped to combat these types of biases, however it is impossible to know whether biased reports were

present in the data. Furthermore, many of the questions surrounding relationships rely heavily on individual perceptions of what concepts like “closeness” mean. Although the survey questions were written as clearly as possible, interpretations of these concepts are subjective and may have differed slightly between participants. The interpretation of variables which were measured via single-item scales (i.e., closeness to caregivers) are of particular concern because single-item measures tend to lack content validity and cannot be tested for internal-consistency given that there is only one item (Sauro, 2018).

Implications and Future Research

The present study may help to inform future research as well as identify potential areas for improvement in the current Canadian model for foster care services to decrease the likelihood that foster care involved girls will come into conflict with the law later in life. Further research is needed to know how best to improve aspects of foster care, however, this research offers a broad basis for that process.

Firstly, ACEs experienced both prior to and during foster care placement seem to be associated with women coming into conflict with the law. Within this correlation, physical abuse and emotional neglect seem to have the strongest association with future arrests. Based on these results it is recommended that foster care and child protective services place a great deal of focus not only on interrupting and removing children from environments where this type of trauma is occurring but also make a greater effort to mitigate the impact of this type of trauma.

Specifically, CPS should be careful to ensure that children are not continuing to experience maltreatment in their foster care placements. It is also recommended that children in care who have experienced trauma receive evidence-based and empirically validated trauma intervention and treatment. Furthermore, it is important to note that ACEs were experienced during foster

care placements as well as prior to placements. Given this finding, it is crucial for foster care organizations to carefully monitor the quality-of-care children are receiving in any form of placement.

The present study does not offer insight into forms of trauma management for girls in foster care. However, based on the results from this study, future research on the effectiveness of various trauma intervention and management strategies for foster care involved girls should focus on abuse and neglect.

In terms of behavioural and academic difficulties, it appears that foster care involved girls who offend later in life tend to be more likely to use alcohol as minors, become suspended from school, and skip school more frequently than their peers who do not offend as they grow older. As previously mentioned, out-of-school status has been associated with offending in more general populations. It seems that out of school status, particularly due to suspension and truancy, is also related to offending in foster care involved girls. Based on these results it is recommended that foster care organizations are careful to ensure girls in foster care continue attending school, both by ensuring they are not truant for inappropriate reasons, and also by encouraging alternative forms of behaviour management which do not require them to be absent from school. These efforts may be better informed by research which explores the reasons why girls in care may be skipping classes as well as the behavioural problems which tend to lead to suspension for this population. Understanding the underlying causes of out-of-school status for girls in care will help to determine proactive measures for maintaining school attendance as opposed to reactive measures for after truancy and behavioural problems have become an issue.

Regarding alcohol use prior to age 18, it is recommended that foster care organizations consider implementing alcohol use intervention strategies for children in care who are using

alcohol. Future research should explore whether alcohol use tends to begin before or after foster care involvement, where foster care involved girls tend to obtain alcohol, and reasons why they begin using alcohol initially. This information will help to create effective intervention strategies for alcohol use among foster care involved populations.

Looking at the effect of social bonds on offending behaviour in foster care involved women, the findings from the present study were entirely contradictory to what previous literature would suggest. Although the current study did not find any association between social bonds with caregivers and offending behaviour, considering previous research, it is still important for foster care organizations to encourage positive and strong social bonds between children and caregivers. Future research should compare social closeness to caregivers between foster care involved and non-foster care involved children to determine whether social bonds are relatively weak (or not) for girls in care compared to their non-foster care involved peers. This will help to determine whether improvements need to be made in this area.

Although no difference was found between the parenting styles experienced by criminalized and non-criminalized girls in care, the majority of women reported that the main parenting style they experienced was affectionless control. Although this did not appear to have an affect on criminalization, affectionless control is not an ideal parenting style as it is characteristic of low levels of affection and care and high levels of overprotection shown toward the child and has been shown to be associated with poor psychiatric outcomes in adulthood (Parker, 1990). It is recommended that foster care organizations promote affectionate and less controlling parenting styles among families, foster care households, and care institutions. This may be a beneficial addition to the foster parent education, training, and information sessions offered by the provinces and territories (Fédération des familles d'accueil et ressources

intermédiaires du Québec, 2017; Foster Family Coalition of the North West Territories, 2012; Government of Alberta, 2021; Government of British Columbia, n.d.; Government of Manitoba, n.d; Government of New Brunswick, n.d.; Government of Newfoundland and Labrador, 2012; Government of Nova Scotia, n.d.; Government of Nunavut, 2010; Government of Prince Edward Island, 2021; Government of Yukon, 2021; League of Ontario Foster Families, 2019; Saskatchewan Foster Families, 2021).

Findings surrounding placement characteristics were also largely inconsistent with previous research. Firstly, although a higher number of placement changes have been found to be associated with offending behaviour in foster care populations (Haapasalo, 2000), this was not the case for the women in our study. However, our participants reported experiencing less than one placement change on average, which is low compared to the number of placements reported in other studies looking at placement changes in foster-care involved youth. Specifically, the average number of placement changes in one study looking at American youth in foster care in 2008 was 2.6 (Ryan et al., 2008). Additionally, Jedwab et al. (2019) found that 53% of their sample of foster care involved youth in the United States experienced at least one placement change within their first three years in foster care. It is recommended that Canadian foster care organizations continue to maintain this low level of placement changes going forward. Secondly, contrary to other research, placement in group homes and institutions did not seem to impact offending behaviour in our sample. We speculated that this may be due to the quality of care in Canadian institutional care compared to the care received in group homes in other areas such as the United States. Future research looking into the differences in residential care in Canada compared to other countries would be necessary to confirm this speculation. Furthermore, if this speculation is correct, this type of research could lead to improvements in care in other parts of

the world should they choose to adopt the Canadian model. Lastly, it was found that both criminalized and non-criminalized women experienced their first placement around 9 years old on average. This is contrary to previous research which suggests criminalized populations who have been in foster care tend to experience their first placement later in life, around 13 years old or later (Haapasalo, 2000). Considering this, the current finding that foster care organizations are placing children at a younger age is hopeful. Based on speculations from previous research, earlier placement likely means children are experiencing shorter periods of trauma in their original home. Given that offence frequency in our sample was fairly low, with the average number of arrests in our sample being only 1.42 and none of the participants reported having been arrested more than 4 times, perhaps age at first placement may be related to frequency of offending more so than the presence of offending behaviour. This may explain why the results from this study contradict past findings. Future research looking into offence frequency may clarify this.

The current study identified having more positive (i.e., supportive, empathetic, kind, comforting) role models and friend groups as protective factors against offending for foster care involved girls. Based on these results it is recommended that foster care organizations and schools encourage positive interactions within environments where children tend to interact with others (such as schools, extracurricular activities, etc.). This may address issues such as behavioural problems, academic difficulties, and attention difficulties that children may be having, encouraging children to take part in extracurricular activities, exploring ways to make school more fun and appealing, and/or promoting positive relationships within the school with faculty, staff, and other students. Further research on foster care involved children's experiences in the education system may help to inform how to improve the educational experience for foster

care involved children, however each individual child is likely to have different needs in terms of making their education a positive experience and forming positive and supportive relationships with others.

This study recruited only participants who identified as women and focused on addressing the gender gap in the research investigating the relationship between foster care and criminality. However, given that the scarcity of literature on this topic expands to males as well as females, these findings may be used to inform future research or improvements in the foster care system for boys in care as well as for girls in care. The relationship between foster care and offending is not unique to girls, and although the findings from this study may not be as relevant to boys in care, some results may be applicable to all children in care regardless of their gender. Particularly, findings surrounding ACEs and trauma may be relevant to all children. Findings from previous studies looking at the impact of ACEs on offending has found that children (regardless of gender) who experienced a higher number of ACEs tended to offend at higher rates than children who experienced fewer ACEs (Baglivio et al. 2015; Fox et al., 2015). Furthermore, although the type of ACEs experienced may differ depending on gender, both boys and girls who enter foster care are likely to have experienced some form of trauma (Haapasalo, 2000). Given this, results from this study surrounding ACEs are likely relevant to both girls and boys in care. Additionally, the literature cited in this study connecting out-of-school status to offending behaviour was initially conducted with male participants, therefore, findings and recommendations from the current study surrounding truancy and suspension could reasonably be applied to boys as well as girls.

Although this study does not provide a comprehensive list of solutions to improve the Canadian foster care system, it does provide a broad framework for understanding areas to focus

on to reduce the risk that foster care involved girls will come into conflict with the law. Trauma intervention and management, appropriate alcohol use intervention strategies, ensuring continued in-school-status, encouraging affectionate and supportive parenting styles, developing positive and supportive relationships with others, and promoting positive experiences in schools are among the key factors identified in this study which may help to improve the current model of foster care in Canada. Canada's current foster care model is by no means failing to achieve its goal of protecting children who experience less than ideal conditions in their home environment, however, these improvements may help to reduce the number of girls in care who begin offending as they enter adolescence and adulthood.

The topic of foster care and offending is scarcely researched. Our hope is that this research will provide a useful steppingstone for further research on how to improve foster care and child protection services in Canada to ensure that Canadian children involved in foster care are receiving the best quality of care and support to reduce the likelihood that they will become criminalized as they grow up.

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Appendix A – Informed Consent Form

INFORMED CONSENT FORM
SMU REB FILE # 21-043
Department of Psychology
Saint Mary's University, 923 Robie Street, Halifax, NS B3H 3C3

Experiences in the Foster Care System and Criminality in Women

Researchers:

Kayla Parsons, kayla.parsons@smu.ca, MSc. student in Psychology at Saint Mary's University
Dr. Meg Ternes, meg.ternes@smu.ca, Professor of Psychology at Saint Mary's University

INTRODUCTION

This research is being conducted by a Saint Mary's University graduate student in the Psychology Department, as part of the Masters Program requirement. The investigators have no financial interest in conducting this research study.

You are invited to participate in this study. Participation will include completion of a series of 10 surveys. This series of surveys will consist of a maximum of 144 questions and should take approximately 45 minutes to complete. Please note that your participation in this research is voluntary and you may withdraw at any time during the study.

PURPOSE OF THIS RESEARCH

The purpose of this study is to examine how experiences in the foster care system differ between women who have been in conflict with the law and women who have not been in conflict with the law. This study will help us to better understand the positive and negative factors that people involved in the foster care system may experience and how these factors relate to offending behaviour.

ELIGIBILITY

Any person residing in Canada who is over the age of 18, identifies as a woman, and has spent any period during their childhood in a foster care placement or care institution is eligible to participate in this research.

WHAT DOES PARTICIPATING MEAN?

Where?

You can access the study online through Qualtrics.

What?

You will complete a series of 10 surveys. In total the surveys consist of a maximum of 144 questions, the number of questions in each survey will vary depending on your answers (you will not see questions that are not applicable to you).

This survey will include questions pertaining to:

- Information about yourself (including your age, your ethnicity, and your gender identity)
 - i.e. what is your gender identity?
 - Male
 - Female
 - Trans
 - Non-binary
 - Not Listed: _____
 - Prefer not to answer
- Your potential experience of arrests, convictions, and incarcerations
 - i.e. have you ever been arrested?
 - Yes
 - No
 - Prefer not to answer
- Your potential experiences in the foster care system
 - i.e. what were the circumstances that lead to your placement in Foster Care?
Please check all that apply:
 - Abuse
 - Neglect
 - Poverty
 - Mental/physical illness of caregiver
 - Death of caregiver
 - Incarceration of caregiver
 - Domestic violence in the home
 - Parental substance abuse

- Special needs not being met by caregiver (for example: mental health, physical health, disabilities, behavioural problems, etc.). Please specify what needs were not being met: _____
- Caregiver was otherwise unable or unwilling to provide appropriate care in a way not outlined above. Please specify: _____
- Other, please specify: _____
- Adverse or traumatic childhood experiences (including any history of abuse, neglect and difficulties in the household or care placements)
 - i.e. Did a parent, caregiver or other adult in the household often or very often: swear at you, insult you, put you down, or humiliate you or act in a way that made you afraid that you might be physically hurt?
 - Yes
 - No
 - Prefer not to answer
- Your potential experience of alcohol and substance use
 - i.e. during the first 18 years of your life, did you ever use drugs for recreational purposes?
 - Yes
 - No
 - Unsure
 - Prefer not to answer
- Your potential experience of mental health diagnoses
 - i.e. During the first 18 years of your life, did you ever have a mental health diagnoses?
 - Yes
 - No
 - Unsure
 - Prefer not to answer
- Your experience in the education system
 - i.e. Did you often skip or have unexcused absences form school or class?
 - Yes

- No
- Prefer not to answer
- Your relationship with your parents
 - i.e. my parent: did not help me as much as I needed. Check the most appropriate box:
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
 - Prefer not to answer
- Personality measure questions
 - i.e. I remain unfriendly to someone who was mean to me. Check the most appropriate box:
 - Strongly disagree
 - Disagree
 - Neutral
 - Agree
 - Strongly agree
 - Prefer not to answer
- Your social supports outside of your family and care placements
 - Prior to age 18, did you have an adult in your life who you consider a positive role model?
 - Yes
 - No
 - Prefer not to answer

If you do not feel comfortable revealing this type of information or discussing these topics, we recommend you do not participate in this research.

How long?

The survey should take approximately 45 minutes to complete. There will be no subsequent research sessions.

WHAT ARE THE POTENTIAL BENEFITS OF THIS RESEARCH?

Research has shown that experience in the foster care system may lead to offending behaviour later in life, however the research on the specific factors of foster care which may contribute to offending behaviour is limited. The literature that focuses on the experiences of women who have been in conflict with the law who also have a history in foster care is lacking even further. Your participation in this research will contribute to a more in depth understanding of how the experiences in the foster care system of women who have offended differ from the experiences of women who have not offended. This will, in turn provide some insight into which factors in foster care may be harmful and which may be helpful in the context of offending.

WHAT ARE THE POTENTIAL RISKS FOR PARTICIPANTS?

Because of the nature of the survey questions, there is some potential of emotional or psychological risk. You will be asked to answer questions about sensitive topics such as your potential experience with the criminal justice system, your experience with the foster care system, adverse or traumatic experiences during childhood including instances of abuse and neglect, and the quality of relationships with others during your childhood.

If any part of this study makes you uncomfortable or distressed, you may withdraw from the study without penalty. If you would prefer to not answer a portion of the study, you will have the option to leave questions blank.

If you feel upset after participation in this study, we encourage you to utilize the resources listed below or reach out to the researchers.

Mental Health Resources:

- Crisis Services Canada for support through call, text, or online chat
 - For connection to a live counselor
 - Telephone: 1-833-456-4566
 - Text: 45645
 - For a list of counseling services in your province
 - Website: <https://www.crisisservicescanada.ca/en/>
- Canadian Mental Health Association (CAMH)
 - For a list of CAMH branches in your area which will connect you with a live counselor
 - Website: <https://cmha.ca/find-your-cmha>
- Psychology Today
 - For a list of community practitioners
 - Website: <https://www.psychologytoday.com/ca/therapists>
- For other Canadian mental health support links
 - Website: <https://www.canada.ca/en/public-health/services/mental-health-services/mental-health-get-help.html>

There may also be potential for social risks involved in the completion of this survey as it is possible for people to see you filling out survey questions, some of which will ask whether you

have ever been the arrested, convicted of a crime, or incarcerated. To protect your privacy, we recommend filling-out the survey using a computer located in a private space, and not leaving your survey responses on-screen and unattended.

If new information arises during the course of the study, it will be communicated to you to reassess your willingness to participate in the research.

WHAT WILL BE DONE WITH MY INFORMATION?

All data collected will be anonymous. Demographic information collected will include age, ethnicity, and gender identity. All data will be kept confidential. Only members of the research team will have access to the information collected. Researchers will not be able to identify you by the information you provide.

Online data will be collected via Qualtrics and stored on servers in and retained for an indefinite period of time and not shared with any third parties. Qualtrics' privacy statement states that, "Qualtrics does not sell or make available Customer Data except as requested by a valid court order, search warrant, subpoena, or otherwise as agreed by the parties or required by law. Qualtrics treats all Customer Data as highly confidential. All Customer Data is safeguarded using industry-best security practices to prevent unlawful disclosure." The computer-transferred data will be retained indefinitely as it may be required for publication purposes.

Once all the data are collected and analyzed for this study, we plan on sharing the information with the research community through conferences, presentations, journal articles, and book chapters. Only aggregate research results will be reported.

If you would like to know about the study findings, a summary of the research results will be posted at <https://smu.ca/academics/summaries-of-completed-research.html>. If you are interested in receiving more information regarding the results of this study, or if you have any questions or concerns, please contact a member of the research team by email at kayla.parsons@smu.ca, or meg.ternes@smu.ca. The study is expected to be completed by April 1st, 2021.

WHAT TYPE OF COMPENSATION IS AVAILABLE FOR PARTICIPATION?

This survey is expected to take approximately 45 minutes to complete. We are offering \$10.00 to compensate you for your time. **To receive the compensation, you will need to click a link provided at the end of the survey**, following the feedback letter. This link will take you to a second survey where your email address will be collected. In this second survey you will be asked if you would prefer to receive a \$10.00 gift card for either Amazon or Wal-Mart. We will send the form of payment you choose to the email address you provide within 3 business days of the time you complete the study.

To protect your anonymity the survey which collects your email address is separate from the initial survey, your data will not be connected to the email address you provide.

HOW CAN I WITHDRAW FROM THE STUDY?

Participation in this study is voluntary and you may withdraw from the research study at any time without penalty.

In order to receive payment for your participation you must click through to the end of the survey and follow the link provided or click the “leave survey and continue to feedback form” button. You can also close your browser, however doing this will not allow you to collect your compensation, for this reason we recommend that you use the “leave survey and continue to feedback form” button if you’d like to withdraw. Keep in mind that you can skip any questions that you do not want to answer by selecting ‘prefer not to answer’.

Please be aware that you will be given the opportunity to withdraw all of the information you provided at the end of the survey on the feedback form by selecting “I would like to withdraw my data”.

HOW CAN I GET MORE INFORMATION?

You can contact a member of the research team to receive the results of this study upon completion at kayla.parsons@smu.ca, or meg.ternes@smu.ca. You may also contact a member of the research team if you have any questions or concerns about this study or wish to further discuss the research. If you have a question or concern about ethical matters, you may contact the SMU Research Ethics Board whose information is listed below.

Before clicking through to the next section, we recommend that you save or take a screenshot of the information on this form in case questions arise or an adverse event occurs, as this information will not be available after you close your browser screen.

CERTIFICATION

The Saint Mary’s University Research Ethics Board has reviewed this research. If you have any questions or concerns about ethical matters or would like to discuss your rights as a research participant, you may contact the Chair of the Research Ethics Board at ethics@smu.ca or 420-5728.

Research Team

- Kayla Parsons, kayla.parsons@smu.ca, MSc. Student in Psychology at Saint Mary’s University
- Meg Ternes, meg.ternes@smu.ca, Professor of Psychology at Saint Mary’s University

Experiences in the Foster Care System and Criminality in Women

Clicking yes indicates that:

I understand what this study is about, appreciate the risks and benefits, and that by consenting I do not waive any of my rights, including the right to take legal action should I be harmed by this research in any way.

I understand that my participation is voluntary and that I can end my participation at any time without penalty.

I have had adequate time to think about the research study and have had the opportunity to ask questions.

To continue to the study, please click “yes” to confirm that you understand the above risks, benefits, and rights as a participant.

Appendix B – Feedback Form

FEEDBACK LETTER
SMU REB FILE # 21-043
Department of Psychology
Saint Mary's University, 923 Robie Street, Halifax, NS B3H 3C3

Experiences in the Foster Care System and Criminality in Women

Researchers:

Kayla Parsons, kayla.parsons@smu.ca, MSc. student in Psychology at Saint Mary's University
Dr. Meg Ternes, meg.ternes@smu.ca, Professor of Psychology at Saint Mary's University

Dear Participant,

We would like to thank you for your participation in this study.

The purpose of this study is to examine how experiences in the foster care system differ between women who have been in conflict with the law and women who have not been in conflict with the law in order to better understand the positive and negative factors that people involved in the foster care system may experience and how these factors relate to criminality.

Only members of the research team will have access to the information you have provided, and all information will be kept confidential. Once all the data are collected and analyzed, the results may be shared with the research community through publications and/or conference presentations.

Your participation in this study is completely voluntary, if for any reason you do not want your data to be used for this research you have the opportunity to withdraw your data now by selecting the box below.

- I would like to withdraw my data.

If you would like to know about the study findings, a summary of the research results will be posted at <https://smu.ca/academics/summaries-of-completed-research.html>. If you are interested in receiving more information regarding the results of this study, or if you have any questions or concerns, please contact the researchers by email at: kayla.parsons@smu.ca, meg.ternes@smu.ca.

To receive the \$10.00 compensation for completing this survey, please click through to the next question and follow the link provided. This link will take you to an additional survey to collect your email address and payment preference (\$10.00 gift card to Amazon or \$10.00 gift card to Wal-Mart). We will send your preferred payment to the email address you provide. The email

address you provide in the second survey will not be connected to the information you provided in this survey.

If you experience an adverse event or emotional distress due to your participation in this study, please feel free to utilize one of the following resources:

Mental Health Resources:

- Crisis Services Canada for support through call, text, or online chat
 - For connection to a live counselor
 - Telephone: 1-833-456-4566
 - Text: 45645
 - For a list of counseling services in your province
 - Website: <https://www.crisisservicescanada.ca/en/>
- Canadian Mental Health Association (CAMH)
 - For a list of CAMH branches in your area which will connect you with a live counselor
 - Website: <https://cmha.ca/find-your-cmha>
- Psychology Today
 - For a list of community practitioners
 - Website: <https://www.psychologytoday.com/ca/therapists>
- Other Canadian mental health support links
 - Website: <https://www.canada.ca/en/public-health/services/mental-health-services/mental-health-get-help.html>

Please also feel free to contact the researchers at kayla.parsons@smu.ca, or meg.ternes@smu.ca, if you experience an adverse event or emotional distress due to your participation in this study.

Before leaving this page, we recommend that you save or take a screenshot of the information on this form in case questions arise or an adverse event occurs, as this information will not be available after you close your browser screen.

This project was reviewed by the Saint Mary's University Research Ethics Board. Should you have any comments or concerns about ethical matters or would like to discuss your rights as a research participant, please contact the Chair of the Research Ethics Board at 902-420-5728 or ethics@smu.ca.

Thank you again for your contribution to this study.

Sincerely,

The Research Team

Appendix C- Demographics

2. How old are you?

3. What is your ethnicity? (Check all that apply)

- White
- Indigenous
- South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.)
- Chinese
- Black
- Filipino
- Latin American
- Arab
- Southeast Asian (e.g., Vietnamese, Cambodian, Laotian, Thai, etc.)
- West Asian (e.g., Iranian, Afghan, etc.)
- Korean
- Japanese
- Not Listed: _____
- Prefer Not to Say

4. What is your gender identity?

- Male
- Female
- Trans
- Non-binary

Not Listed: _____

Prefer not to say

Appendix D – Offence History Questionnaire

1. Have you ever been arrested?
 - a. Yes
 - b. No

If the participant answers 'yes' they will continue through to the rest of the questionnaire. If they answer 'no', they will continue to the next questionnaire

2. How many times have you been arrested?

3. How old were you at the time of your first arrest?

4. Have you ever been convicted of an offence?
 - a. Yes
 - b. No

If the participant answers 'yes' they will continue through to the rest of the questionnaire. If they answer 'no', they will continue to the next questionnaire

5. How many offences have you been convicted of?

6. For each of the offences you were convicted of, please indicate what the charges were, and whether you were incarcerated for that conviction.

6a. Charges: _____

6b. Were you incarcerated?

- a. Yes
- b. No

6c. Did you have anymore convictions you would like to indicate?

- a. Yes
- b. No

If the participant answers 'yes' to 6c. they will see this screen again until they answer 'no'. When the participants answers 'no' to 6c, they will continue to the next questionnaire

Appendix E – Foster Care History Questionnaire

1. How old were you when you first entered the Foster Care System?

2. What were the circumstances that lead to your placement in Foster Care? Please check all that apply:
 - Abuse
 - Neglect
 - Poverty
 - Mental/physical illness of caregiver
 - Death of caregiver
 - Incarceration of caregiver
 - Domestic violence in the home
 - Parental substance abuse
 - Special needs not being met by caregiver (for example: mental health, physical health, disabilities, behavioural problems, etc.). Please specify what needs were not being met: _____
 - Caregiver was otherwise unable or unwilling to provide appropriate care in a way not outlined above. Please specify: _____
 - Other, please specify: _____
3. Approximately how long were you in the FC/CPS system overall?
4. During the time you were in the Foster Care System, did you remain in contact with any biological caregivers?
 - a. Yes
 - b. No
 - c. Prefer not to say

If participants answer ‘yes’, they will see questions 5 and 6. If they answer ‘no’. they will skip to question 7

5. Which caregiver(s) did you remain in contact with?

-
6. On a scale from 1 to 7, 1 not at all close and 7 being very close, how close would you say you were with the caregiver(s) you mentioned?

1 2 3 4 5 6 7

7. On a scale from 1 to 7, with 1 being very poor, and 7 being very good, how would you rate your overall experience in the foster care system?

1 2 3 4 5 6 7

8. On a scale from 1 to 7, 1 being not at all difficult and 7 being very difficult, how difficult did you find the following during your time in the foster care system:

- a. Making friends:

1 2 3 4 5 6 7

- b. Keeping friends:

1 2 3 4 5 6 7

- c. Developing good relationships with teachers, coaches, or other adults outside of your family:

1 2 3 4 5 6 7

- d. Being a member of social groups (i.e. clubs, sports, committees, etc.):

1 2 3 4 5 6 7

9. During the time you were in foster care, did you have more than one placement?
- Yes
 - No

If participants answer 'yes', they will see question 11. If they answer 'no', they will skip to question 12*

10. How many placement changes did you experience in the foster care system?
-

11. Please answer the following questions for each individual foster care placement:

For your first placement:

- 12a. How old were you when this placement began?

- 12b. Approximately how long did this placement last?
- 12c. What type of placement was this?
- a. In home care
 - b. Foster Family
 - c. Group Home
 - d. Mental health care institution
 - e. other, please specify: _____
- 12d. On a scale from 1 to 7, 1 being not at all close and 7 being very close, how close do you feel you were to any caregiver at this placement?
- 1 2 3 4 5 6 7
- 12e. Did you experience any form of neglect or abuse at this placement?
- a. Yes
 - b. No
- 12f. On a scale from 1 to 7, 1 being very poor and 7 being very good, please rate your overall experience at this placement:
- 1 2 3 4 5 6 7
- 12g. Why did this placement end?
- 12h. Where did you go after this placement?
- a. New placement
 - b. Back to biological family
 - c. Other, please specify: _____
- 12i. Did you have another foster care placement after this one?
- a. Yes
 - b. No

If the participant answers 'yes' to 12i. they will see this screen again with the header 'for your next placement:' until they answer 'no'. When the participants answers 'no' to 12i, they will continue to the next questionnaire

Appendix F – ACE Measure (Schluman & Maul, 2019)

While you were growing up, during your first 18 years of life both in and out of foster care:

1. Did a parent, caregiver or other adult in the household often or very often:

Swear at you, insult you, put you down, or humiliate you?

or

Act in a way that made you afraid that you might be physically hurt?

- a. Yes
b. No

***If the participant answers ‘yes’ to question 1, they will see question 1a. If they answer ‘no’ to question 1, they will skip to question 2. ***

- 1a. Please indicate where you were living when this happened to you. Check all that apply.

- With my original family
 With a foster care family
 In a group home or residential placement
 Other, please specify: _____

2. Did a parent, caregiver or other adult in the household often or very often:

Push, grab, slap, or throw something at you?

or

Ever hit you so hard that you had mark or were injured?

- a. Yes
b. No

***If the participant answers ‘yes’ to question 2, they will see question 2a. If they answer ‘no’ to question 2, they will skip to question 3. ***

- 2a. Please indicate where you were living when this happened to you. Check all that apply.

- With my original family
 With a foster care family
 In a group home or residential placement
 Other, please specify: _____

3. Did an adult or person at least 5 years older than you ever:

Touch or fondle you or have you touch their body in a sexual way?

or

Attempt or actually have oral, anal, or vaginal intercourse with you?

- a. Yes
b. No

***If the participant answers ‘yes’ to question 3, they will see question 3a. If they answer ‘no’ to question 3, they will skip to question 4. ***

- 3a. Please indicate where you were living when this happened to you. Check all that apply.

- With my original family
 With a foster care family

- In a group home or residential placement
- Other, please specify: _____

4. Did you often or very often feel that:

No one in your family or foster family loved you or thought you were important or special?

or

Your family or foster family didn't look out for each other, feel close to each other, or support each other?

- a. Yes
- b. No

***If the participant answers 'yes' to question 4, they will see question 4a. If they answer 'no' to question 4, they will skip to question 5. ***

4a. Please indicate where you were living when you felt this way. Check all that apply.

- With my original family
- With a foster care family
- In a group home or residential placement
- Other, please specify: _____

5. Did you often or very often feel that:

You didn't have enough to eat, had to wear dirty clothes, or had no one to protect you?

or

Your parents/caregivers were too drunk or high to take care of you or take you to the doctor if you needed?

- a. Yes
- b. No

***If the participant answers 'yes' to question 5, they will see question 5a. If they answer 'no' to question 5, they will skip to question 6. ***

5a. Please indicate where you were living when you felt this way. Check all that apply.

- With my original family
- With a foster care family
- In a group home or residential placement
- Other, please specify: _____

6. Were your parents ever separated or divorced?

- a. Yes
- b. No

7. Was your mother/stepmother/other female caregiver:

Often or very often pushed, grabbed, slapped or had something thrown at her?

or

Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard?

or

Ever repeatedly hit for at least a few minutes or threatened with a gun or knife?

- a. Yes
- b. No

***If the participant answers 'yes' to question 7, they will see question 7a. If they answer 'no' to question 7, they will skip to question 8. ***

7a. Please indicate where this happened. Check all that apply.

- With my original family
- With a foster care family
- In a group home or residential placement
- Other, please specify: _____

8. Did you live with anyone who was a problem drinker or alcoholic or who used non-prescription drugs?

- a. Yes
- b. No

***If the participant answers 'yes' to question 8, they will see question 8a. If they answer 'no' to question 8, they will skip to question 9. ***

8a. Please indicate where you were living with this person. Check all that apply.

- With my original family
- With a foster care family
- In a group home or residential placement
- Other, please specify: _____

9. Was a household member depressed or mentally ill or attempt suicide?

- a. Yes
- b. No

***If the participant answers 'yes' to question 9, they will see question 9a. If they answer 'no' to question 9, they will skip to question 10. ***

9a. Please indicate where you were living with this person. Check all that apply.

- With my original family
- With a foster care family
- In a group home or residential placement
- Other, please specify: _____

10. Did a household member ever go to prison?

- a. Yes
- b. No

***If the participant answers 'yes' to question 10, they will see questions 10a and 10b. If they answer 'no' to question 10, they will skip to the next questionnaire. ***

10a. Please indicate where you were living with this person. Check all that apply.

- With my original family
- With a foster care family

- In a group home or residential placement
- Other, please specify:

10.b Was the person who went to prison your parent?

- c. Yes, my mother
- d. Yes, my father
- e. Yes, both of my parents
- f. No, they were not my parent

Appendix G – Substance Use History Questionnaire

1. During the first 18 years of your life, did you ever drink alcohol?
 - a. Yes
 - b. No

***If the Participant answers ‘yes’, they will see questions 2-6. If they answer ‘no’ they will skip to question 7. ***
2. How old were you when you first drank alcohol?

3. Were you in a foster care placement when you started drinking alcohol?
 - a. Yes
 - b. No
 - c. Unsure/Prefer not to say
4. Think back to the time you were drinking alcohol the most during the first 18 years of your life, approximately how frequently did you drink alcohol at that time?
 - a. Only once
 - b. Less than one a month
 - c. Once a month
 - d. More than once a month but less than once a week
 - e. Once a week
 - f. 2 or 3 times a week
 - g. Daily or almost daily
5. How old were you when you started using alcohol this frequently?

6. Were you in a foster care placement when you started drinking this frequently?
 - a. Yes
 - b. No
 - c. Unsure/ Prefer not to say
7. During the first 18 years of your life, did you ever use drugs for recreational purposes?
 - a. Yes
 - b. No

***If the Participant answers ‘yes’, they will see questions 8-13. If they answer ‘no’ they will skip to question 14. ***
8. What drugs did you use? Please check all that apply.
 - Cannabis (any form)
 - Cocaine
 - Ketamine
 - Ecstasy/MDMA
 - Benzodiazepines (i.e. Xanax, Valium, Ativan, etc.)
 - Opioids (i.e. heroin, fentanyl, oxycodone, etc.)
 - LSD
 - Psilocybin (magic mushrooms)
 - Methamphetamine

- Other, please specify:
9. How old were you when you first used drugs recreationally?
-
10. Were you in a foster care placement when you started using drugs recreationally?
- Yes
 - No
 - Unsure/Prefer not to say.
11. Think back to the time you were using drugs recreationally the most during the first 18 years of your life, approximately how frequently did you use at that time?
- Only once
 - Less than one a month
 - Once a month
 - More than once a month but less than once a week
 - Once a week
 - 2 or 3 times a week
 - Daily or almost daily
12. How old were you when you started using drugs this frequently?
-
13. Were you in a foster care placement when you started using drugs this frequently?
- Yes
 - No
 - Unsure/Prefer not to say.
14. During your first 18 years of life, were you ever diagnosed with a substance use disorder?
- Yes
 - No

Appendix H – Mental Health History Questionnaire

1. During the first 18 years of your life, did you ever have a mental health diagnosis?
***If the participant answers ‘yes’ they will see questions 2 and 3. If they answer ‘no’ they will continue to the next questionnaire. ***
2. What was the diagnosis (or diagnoses if there were more than one)?

3. How old were you at the time of your first diagnosis?

Appendix I – Experience in the Educational System Questionnaire

1. What is the highest grade you have completed?
 - a. No schooling completed
 - b. Some elementary
 - c. Completed elementary
 - d. Some junior high
 - e. Completed junior high
 - f. Some high school
 - g. Highschool diploma/GED
 - h. Some Post secondary
 - i. Trade/vocational school completed
 - j. Bachelor's degree
 - k. Some graduate school
 - l. Completed graduate school
2. Were you ever suspended from school?
 - a. Yes
 - b. No

*** If the participant answers yes to question 2 they will see question 3. If they answer 'no', they will skip to question 4. ***
3. Approximately how often would you say you got suspended from school
 - a. Only once
 - b. Two or three times
 - c. 4-6 times
 - d. 8-10 times
 - e. 10-15 times
 - f. More than 15 times
4. Were you ever expelled from school?
 - a. Yes
 - b. No
5. Did you often skip or have unexcused absences from school or class?
 - a. Yes
 - b. No
6. Think back to the time when you were absent from school or class the most, how many days a month on average were you absent?
 - a. Less that one day a month
 - b. About one day a month
 - c. Two or three days a month
 - d. More that two or three days a moth but less than one day a week
 - e. About one day a week
 - f. Two or three days a week
 - g. Every day or almost every day
7. During the time when you were absent the most, where were you living?
 - a. With original/biological family

- b. With a foster family
 - c. In a group home
 - d. A different care facility, please specify: _____
 - e. Other. Please specify: _____
8. During the time when you were absent the most, please list the most common reason(s) why you chose not to go.
-

Excluding any post secondary education, please rate your experience in school for the following questions:

9. On a scale from 1 to 7, 1 being not at all difficult and 7 being extremely difficult, how difficult was it for you to achieve passing grades?

1 2 3 4 5 6 7

10. On a scale from 1 to 7, 1 being not at all difficult and 7 being extremely difficult, how difficult was it for you to pay attention in school?

1 2 3 4 5 6 7

11. On a scale from 1 to 7, 1 being never and 7 being very frequently, how often were you in trouble at school?

1 2 3 4 5 6 7

12. On a scale from 1 to 7, 1 being very negative and 7 being very positive, how would you rate your experience in school?

1 2 3 4 5 6 7

Appendix J – Parental Bonding Instrument (PBI) (Parker et al., 1979)

A. Was your mother present for any period of your life during your first 16 years?

- a. Yes
- b. No
- c. Prefer not to say

If the participant answers ‘yes’ they will continue to the section of the PBI regarding their mother. If they answer ‘no’ they will skip to B.

This portion of the survey lists various attitudes and behaviours of parents. As you remember your biological/birth mother in your first 18 years, please check the most appropriate box below each statement.

1. Spoke to me in a warm and friendly voice.
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
2. Did not help me as much as I needed.
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
3. Let me do things I liked doing.
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
4. Seemed emotionally cold to me
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
5. Appeared to understand my problems and worries
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
6. Was affectionate to me
 - Very like
 - Moderately like
 - Moderately unlike

- Very unlike
- 7. Liked me to make my own decisions
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
- 8. Did not want me to grow up
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
- 9. Tried to control everything I did
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
- 10. Invaded my privacy
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
- 11. Enjoyed talking things over with me
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
- 12. Frequently smiled at me
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
- 13. Tended to baby me
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
- 14. Did not seem to understand what I needed or wanted
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike

15. Let me decide things for myself
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
16. Made me feel I wasn't wanted
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
17. Could make me feel better when I was upset
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
18. Did not talk to me very much
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
19. Tried to make me feel dependent on them
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
20. Felt I could not look after myself unless they were around
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
21. Gave me as much freedom as I wanted
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
22. Let me go out as often as I wanted
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
23. Was overprotective of me

- Very like
- Moderately like
- Moderately unlike
- Very unlike

24. Did not praise me

- Very like
- Moderately like
- Moderately unlike
- Very unlike

25. Let me dress in any way I pleased

- Very like
- Moderately like
- Moderately unlike
- Very unlike

B. Besides your biological/birth mother, was there any other prominent parental figure present for any period that you can remember during you first 18 years of life?

- a. Yes
- b. No
- c. Prefer not to say

If the participant answers 'yes' they will continue to the section of the PBI regarding the other prominent parental figure. If they answer 'no' they will skip to the next questionnaire.

1. What was this other prominent parental figure's relationship to you (e.g. father, grandmother, foster mother, etc.)? If you had more than one other prominent parental figure during this time, please choose the one that is most prominent to you.
-

This portion of the survey lists various attitudes and behaviours of parents. As you remember your other parental figure in your first 18 years, please check the most appropriate box below each statement.

2. Spoke to me in a warm and friendly voice.
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
3. Did not help me as much as I needed.
 - Very like

- Moderately like
 - Moderately unlike
 - Very unlike
4. Let me do things I liked doing.
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
5. Seemed emotionally cold to me
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
6. Appeared to understand my problems and worries
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
7. Was affectionate to me
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
8. Liked me to make my own decisions
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
9. Did not want me to grow up
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
10. Tried to control everything I did
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
11. Invaded my privacy
- Very like
 - Moderately like

- Moderately unlike
 - Very unlike
12. Enjoyed talking things over with me
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
13. Frequently smiled at me
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
14. Tended to baby me
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
15. Did not seem to understand what I needed or wanted
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
16. Let me decide things for myself
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
17. Made me feel I wasn't wanted
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
18. Could make me feel better when I was upset
- Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
19. Did not talk to me very much
- Very like
 - Moderately like
 - Moderately unlike

- Very unlike
- 20. Tried to make me feel dependent on them
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
- 21. Felt I could not look after myself unless they were around
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
- 22. Gave me as much freedom as I wanted
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
- 23. Let me go out as often as I wanted
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
- 24. Was overprotective of me
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
- 25. Did not praise me
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike
- 26. Let me dress in any way I pleased
 - Very like
 - Moderately like
 - Moderately unlike
 - Very unlike

Appendix K – The Brief HEXACO Inventory (BHI) (de Vries, 2013)

Instructions: Please indicate to what extent you agree with the following statements, using the following answering categories: 1=strongly disagree, 2=disagree, 3=neutral (neither agree, nor disagree), 4=agree, and 5=strongly agree.

1. I can look at a painting for a long time.
2. I make sure that things are in the right spot.
3. I remain unfriendly to someone who was mean to me.
4. Nobody likes talking with me.
5. I am afraid of feeling pain.
I find it difficult to lie.
6. I think science is boring.
7. I postpone complicated tasks as long as possible.
8. I often express criticism.
9. I easily approach strangers.
10. I worry less than others.
11. I would like to know how to make lots of money in a dishonest manner.
12. I have a lot of imagination.
13. I work very precisely.
14. I tend to quickly agree with others.
15. I like to talk with others.
16. I can easily overcome difficulties on my own.
17. I want to be famous.
18. I like people with strange ideas.
19. I often do things without really thinking.
20. Even when I am treated badly, I remain calm.
21. I am seldom cheerful.
22. I have to cry during sad or romantic movies.
23. I am entitled to special treatment.

Appendix L – Social Supports Questionnaire

1. Prior to age 18, did you have an adult in your life who you consider a positive role model?
 - a. Yes
 - b. No

***If the participant answers ‘yes’, they will see questions 2-4, if they answer ‘no’, they will skip to question 5. ***
2. Who was the person that you consider a positive role model? Please check all that apply
 - Parent
 - Grandparent
 - Aunt/Uncle
 - Older sibling
 - Older cousin
 - Foster care caregiver
 - Other foster care household/placement member
 - Friend
 - Coach
 - Teacher/instructor
 - Other, please specify: _____
3. On a scale from 1 to 7, 1 being not at all and 7 being very much, to what extent do the following words describe this role model:

Kind	1	2	3	4	5	6	7
Emotionally supportive	1	2	3	4	5	6	7
Comforting	1	2	3	4	5	6	7
Empathetic	1	2	3	4	5	6	7
4. Why do you consider this person to be a positive role model?

5. Prior to age 18, did you have a friend group that you enjoyed being with?
 - a. Yes
 - b. No

***If the participant answers ‘yes’, they will see questions 6 and 7, if they answer ‘no’, they will skip to question 8. ***

6. On a scale from 1 to 7, 1 being not at all and 7 being very much, to what extent do the following words describe the group(s) you hung out with prior to age 18:

Kind

1 2 3 4 5 6 7

Emotionally supportive

1 2 3 4 5 6 7

Comforting

1 2 3 4 5 6 7

Empathetic

1 2 3 4 5 6 7

7. Could you elaborate on why you chose the rating you did?

-
8. Prior to age 18, were you a member of a club, team, or other type of group?

a. Yes

b. No

***If the participant answers 'yes', they will continue to questions 9 and 10. If they answer 'no' they will be directed to the feedback form. ***

9. On a scale from 1 to 7, 1 being not at all and 7 being very much, to what extent do the following words describe your experience as a member of this group:

Involved

1 2 3 4 5 6 7

Included

1 2 3 4 5 6 7

Emotionally supported

1 2 3 4 5 6 7

Understood

1 2 3 4 5 6 7

10. Could you elaborate on why you chose the rating you did?
-

Appendix M – Hypothesis 1.1 Power AnalysisPost-Hoc, Independent *t*-test

Input	Output
Effect size $d = 0.55$	Noncentrality parameter $\delta = 2.96$
α err prob = 0.05	Critical $t = 1.66$
Sample size group 1 = 41	Df = 138
Sample size group 2 = 99	Power ($1 - \beta$ err prob) = 0.90

Appendix N - Hypothesis 1.2 Power AnalysisPost-Hoc, Goodness-of-fit χ^2

Input	Output
Effect size $w = 0.17$	Noncentrality parameter $\lambda = 4.10$
α err prob = 0.05	Critical $\chi^2 = 3.84$
Total sample size = 142	Power ($1 - \beta$ err prob) = 0.53
Df = 1	

Appendix O - Hypothesis 1.3 Power AnalysisPost-Hoc, Goodness-of-fit χ^2

Input	Output
Effect size $w = 0.19$	Noncentrality parameter $\lambda = 5.13$
α err prob = 0.05	Critical $\chi^2 = 3.84$
Total sample size = 142	Power ($1 - \beta$ err prob) = 0.62
Df = 1	

Appendix P - Hypothesis 1.4 Power AnalysisPost-Hoc, Goodness-of-fit χ^2

Input	Output
Effect size $w = 0.03$	Noncentrality parameter $\lambda = 0.03$
α err prob = 0.05	Critical $\chi^2 = 3.84$
Total sample size = 36	Power ($1 - \beta$ err prob) = 0.05
Df = 1	

Appendix Q - Hypothesis 2.1 Power AnalysisPost-Hoc, Goodness-of-fit χ^2

Input	Output
Effect size $w = 0.12$	Noncentrality parameter $\lambda = 2.09$
α err prob = 0.05	Critical $\chi^2 = 3.84$
Total sample size = 145	Power ($1 - \beta$ err prob) = 0.30
Df = 1	

Appendix R - Hypothesis 2.2 Power AnalysisPost-Hoc, Goodness-of-fit χ^2

Input	Output
Effect size $w = 0.07$	Noncentrality parameter $\lambda = 0.68$
α err prob = 0.05	Critical $\chi^2 = 3.84$
Total sample size = 138	Power ($1 - \beta$ err prob) = 0.13
Df = 1	

Appendix S - Hypothesis 2.3 Power Analysis

Post-Hoc, Mann-Whitney test

Input	Output
Effect size $d = 0.42$	Noncentrality parameter $\delta = 2.23$
α err prob = 0.05	Critical $t = 1.66$
Sample size group 1 = 42	Df = 132.65
Sample size group 2 = 99	Power ($1 - \beta$ err prob) = 0.72

Appendix T - Hypothesis 2.4 Power AnalysisPost-Hoc, Independent *t*-test

Input	Output
Effect size $d = 0.71$	Noncentrality parameter $\delta = 3.71$
α err prob = 0.05	Critical $t = 1.66$
Sample size group 1 = 38	Df = 133
Sample size group 2 = 97	Power ($1 - \beta$ err prob) = 0.98

Appendix U - Hypothesis 2.5 Power AnalysisPost-Hoc, Goodness-of-fit χ^2

Input	Output
Effect size $w = 0.16$	Noncentrality parameter $\lambda = 3.12$
α err prob = 0.05	Critical $\chi^2 = 3.84$
Total sample size = 122	Power ($1 - \beta$ err prob) = 0.42
Df = 1	

Appendix V - Hypothesis 3.1 Power AnalysisPost-Hoc, Independent *t*-test

Input	Output
Effect size $d = 0.07$	Noncentrality parameter $\delta = 0.34$
α err prob = 0.05	Critical $t = 1.66$
Sample size group 1 = 37	Df = 98
Sample size group 2 = 63	Power ($1 - \beta$ err prob) = 0.10

Appendix W - Hypothesis 3.2 Power AnalysisPost-Hoc, Independent *t*-test

Input	Output
Effect size $d = -0.16$	Noncentrality parameter $\delta = -0.09$
α err prob = 0.05	Critical $t = -1.65$
Sample size group 1 = 43	Df = 152
Sample size group 2 = 111	Power ($1 - \beta$ err prob) = 0.06

Appendix X - Hypothesis 3.3 Power AnalysisPost-Hoc, Independent *t*-test

Input	Output
Effect size $d = 0.09$	Noncentrality parameter $\delta = 0.50$
α err prob = 0.05	Critical $t = 1.66$
Sample size group 1 = 44	Df = 150
Sample size group 2 = 108	Power ($1 - \beta$ err prob) = 0.13

Appendix Y - Hypothesis 3.4 Power Analyses

PBI Biological Mother

Post-Hoc, Goodness-of-fit χ^2

Input	Output
Effect size $w = 0.25$	Noncentrality parameter $\lambda = 3.63$
α err prob = 0.05	Critical $\chi^2 = 5.99$
Total sample size = 58	Power ($1 - \beta$ err prob) = 0.38
Df = 2	

PBI Other Parental Figure

Post-Hoc, Goodness-of-fit χ^2

Input	Output
Effect size $w = 0.05$	Noncentrality parameter $\lambda = 0.11$
α err prob = 0.05	Critical $\chi^2 = 3.84$
Total sample size = 43	Power ($1 - \beta$ err prob) = 0.06
Df = 1	

Appendix Z - Hypothesis 4.1 Power AnalysisPost-Hoc, Goodness-of-fit χ^2

Input	Output
Effect size $w = 0.09$	Noncentrality parameter $\lambda = 1.29$
α err prob = 0.05	Critical $\chi^2 = 3.84$
Total sample size = 159	Power ($1 - \beta$ err prob) = 0.21
Df = 1	

Appendix AA - Hypothesis 4.2 Power AnalysisPost-Hoc, Independent *t*-test

Input	Output
Effect size $d = 0.08$	Noncentrality parameter $\delta = 0.46$
α err prob = 0.05	Critical $t = 1.65$
Sample size group 1 = 48	Df = 155
Sample size group 2 = 109	Power ($1 - \beta$ err prob) = 0.12

Appendix AB - Hypothesis 4.3 Power AnalysisPost-Hoc, Independent *t*-test

Input	Output
Effect size $d = 0.14$	Noncentrality parameter $\delta = 0.79$
α err prob = 0.05	Critical $t = 1.65$
Sample size group 1 = 44	Df = 154
Sample size group 2 = 112	Power ($1 - \beta$ err prob) = 0.19

Appendix AC - Hypothesis 5.1 and 5.2 Power Analyses**Honesty-Humility**Post-Hoc, Independent *t*-test

Input	Output
Effect size $d = -0.12$	Noncentrality parameter $\delta = -0.59$
α err prob = 0.05	Critical $t = -1.66$
Sample size group 1 = 34	Df = 120
Sample size group 2 = 88	Power ($1 - \beta$ err prob) = 0.15

EmotionalityPost-Hoc, Independent *t*-test

Input	Output
Effect size $d = 0.39$	Noncentrality parameter $\delta = 2.03$
α err prob = 0.05	Critical $t = 1.66$
Sample size group 1 = 39	Df = 126
Sample size group 2 = 39	Power ($1 - \beta$ err prob) = 0.65

E[X]traversionPost-Hoc, Independent *t*-test

Input	Output
Effect size $d = -0.39$	Noncentrality parameter $\delta = -1.97$
α err prob = 0.05	Critical $t = -1.66$
Sample size group 1 = 36	Df = 121
Sample size group 2 = 87	Power ($1 - \beta$ err prob) = 0.62

AgreeablenessPost-Hoc, Independent *t*-test

Input	Output
Effect size $d = -0.13$	Noncentrality parameter $\delta = -0.67$
α err prob = 0.05	Critical $t = -1.66$
Sample size group 1 = 37	Df = 125
Sample size group 2 = 90	Power ($1 - \beta$ err prob) = 0.16

ConscientiousnessPost-Hoc, Independent *t*-test

Input	Output
Effect size $d = -0.12$	Noncentrality parameter $\delta = -0.63$
α err prob = 0.05	Critical $t = -1.66$
Sample size group 1 = 39	Df = 129
Sample size group 2 = 92	Power ($1 - \beta$ err prob) = 0.15

OpennessPost-Hoc, Independent *t*-test

Input	Output
Effect size $d = -0.18$	Noncentrality parameter $\delta = -0.92$
α err prob = 0.05	Critical $t = -1.66$
Sample size group 1 = 37	Df = 125
Sample size group 2 = 90	Power ($1 - \beta$ err prob) = 0.23

Appendix AD - Hypothesis 5.3 Power AnalysisPost-Hoc, Independent *t*-test

Input	Output
Effect size $d = 0.69$	Noncentrality parameter $\delta = 3.47$
α err prob = 0.05	Critical $t = 1.66$
Sample size group 1 = 35	Df = 125
Sample size group 2 = 92	Power ($1 - \beta$ err prob) = 0.96

Appendix AE - Hypothesis 5.4 Power AnalysisPost-Hoc, Goodness-of-fit χ^2

Input	Output
Effect size $w = 0.002$	Noncentrality parameter $\lambda = 0.00$
α err prob = 0.05	Critical $\chi^2 = 3.84$
Total sample size = 123	Power ($1 - \beta$ err prob) = 0.05
Df = 1	

Appendix AF – Power Analyses for Additional Analyses

Role Model *t*-test Power Analysis

Post-Hoc, Independent *t*-test

Input	Output
Effect size $d = 0.82$	Noncentrality parameter $\delta = 3.12$
α err prob = 0.05	Critical $t = 1.67$
Sample size group 1 = 21	Df = 66
Sample size group 2 = 47	Power ($1 - \beta$ err prob) = 0.93

Friend Group *t*-test Power Analysis

Post-Hoc, Independent *t*-test

Input	Output
Effect size $d = 0.93$	Noncentrality parameter $\delta = 3.65$
α err prob = 0.05	Critical $t = 1.67$
Sample size group 1 = 23	Df = 68
Sample size group 2 = 47	Power ($1 - \beta$ err prob) = 0.98

Other Social Group *t*-test Power AnalysisPost-Hoc, Independent *t*-test

Input	Output
Effect size $d = 0.70$	Noncentrality parameter $\delta = 2.11$
α err prob = 0.05	Critical $t = 1.68$
Sample size group 1 = 13	Df = 41
Sample size group 2 = 30	Power ($1 - \beta$ err prob) = 0.67
