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Impact of Placement Disruption on School Outcomes in Maltreated Youth

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IMPACT OF PLACEMENT DISRUPTION ON SCHOOL OUTCOMES IN MALTREATED YOUTH

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ABSTRACT

School attendance is a crucial component of a youth's ability to access resources and attain educational success. Maltreated youth are at increased risk for school absences, poor school performance, impairment in cognitive processes, and development of psychopathology. Disruption from their known systems (i.e., family, social, school) as a result of removal from home creates unique and substantial barriers for maltreated youth in attending and engaging in school. The present study used a sample of maltreated youth and binomial logistic regression analyses to determine if the number of lifetime placements impacts school outcome variables of school attendance, classroom behavior, and academic achievement. The present study highlighted the educational impacts of placement disruption and explored implications for public policy regarding maltreated youth. Hypothesis 1 was that a significant relationship would be found between impairment across school outcome variables and the number of lifetime transfers in housing. Hypothesis 2 was that a significant relationship would be found between clinician's ratings of disruptive classroom behaviors and the number of lifetime transfers in housing and a youth's demographic variables (i.e., race, gender, age, longevity in DFS, assessed before or after COVID-19 shutdown). Hypothesis 3 was that a significant relationship would be found between impairment across school outcome variables and the number of lifetime placements within high-risk settings (i.e., inpatient psychiatric treatment facilities, and detention centers). Binomial logistic regression was used to evaluate the hypotheses. Hypotheses were partially supported. Findings determined youth were 2.1 times as likely to experience problematic classroom behaviors for every 9.60 placements after initial 9 placements. Furthermore, 3 lifetime placements within inpatient psychiatric care settings increased the likelihood of problematic classroom behaviors by 1.59 times. No association between school achievement and the lifetime

number of placements, demographic variables, or high-risk placements was found. Age was a significant predictor of problematic school attendance in that older youth were 1.29 times as likely to experience problematic school attendance for every year they age. The present study's findings have implications for policies focusing on research specific to CPS-involved youth, the incorporation of trauma informed school systems, increased mental health access, and stabilization for home and school placement at the local, state, and federal levels. Additional research is necessary to further evaluate the impact of CPS involvement on school outcomes.

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DEDICATION

To D.B.C.

For your patience, your support, and for believing in me.

Without you, this would not have been possible.

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CHAPTER 1

INTRODUCTION

School attendance is a crucial component of a youth's ability to access resources and attain educational success. Students who miss school lose opportunities to learn and to engage socially with peers. According to the U.S. Department of Education, as much as 16 percent of the student population missed enough days of school to be chronically absent during the 2017-2018 school year (2019). Historically, the term school absenteeism has encapsulated excusable or inexcusable absences from school (Kearney, 2008b). Recent research has called for the use of an integrative approach utilizing the term school attendance/problems (SAPs) to best describe the lack of involvement in school (Kearney, 2021). The COVID-19 pandemic resulted in unprecedented school closures, further impacting many students' ability to access educational opportunities (Kearney & Childs, 2021). Negative effects resulting from SAPs impact educational and career opportunities as well as social, mental and physical well-being (Ansari & Pianta, 2019; Rankine et al., 2022). Past research has identified influencing factors of SAPs, which has in turned provided greater clarity in how to promote greater school attendance.

Existing influencing factors for SAPs range from child, community, family, parent, peer, school and systemic factors (Kearney, 2008b). Child maltreatment is a known contextual risk factor which increases risk of SAPs (Kearney, 2008b). Maltreated youth are more likely to miss school by comparison to their non-maltreated peers (Armfield et al., 2020; Hagborg et al., 2018; Kearney, 2008b). A singular report of child maltreatment has a rapid negative effect on school attendance and long-term effects on school performance (Leiter, 2007). Furthermore, maltreated youth are at increased risk for poor school performance, impairment in cognitive processes,

psychopathology and decreased physical health (Daignault & Hébert, 2009; Gould et al., 2012; Herringa, 2017; Jaffee, 2017).

Substantiated maltreatment often precipitates the removal of a youth from their home environment, which may also result in the inability to continue attending the same school (Font & Maguire-Jack, 2013). Maltreated youth experience a significant adaptation to their social systems transition from one system of care to another when initially removed from their biological home. Specifically, maltreated youth's initial system of care likely exists in social networks developed in their biological family, community, and school. After removal from their home, maltreated youth must navigate new intricacies between systems of care found in residential housing, mental health services, court, foster care systems and existing social networks. Disruption from their known systems (i.e., family, social, school) as a result of the actions of caregivers creates unique and substantial barriers for maltreated youth in attending and engaging in school. Additionally, these disruptions may impact a youth's ability to use emotional and cognitive coping strategies effectively, which may emerge as negative classroom behaviors.

Increased understanding of the impact of placement disruptions through examining the relationship between number of placement disruptions and predictors of SAPs (i.e., classroom behavior, academic achievement and school attendance) allows for better support of this vulnerable population. The present study evaluated the relationship between number of placements and predictors of SAPs through dimensional analyses. Hypotheses were based on extant literature. The present study used a sample of maltreated youth and binomial regression analyses to determine if the number of lifetime placements impacts school attendance, classroom behavior, and academic achievement. Evaluation of these analyses increased conceptual understanding of how placement disruptions impacts predictors of SAPs. The present study

highlighted the educational impacts of placement disruption and explored implications for public policy regarding maltreated youth. The following sections review existent literature on the impacts of child maltreatment on functioning, current understanding of SAPs and the relationship between child maltreatment and predictors of SAPs (i.e., classroom behavior, academic achievement and school attendance).

CHAPTER 2

REVIEW OF RELATED LITERATURE

Child Maltreatment

Definitions of child maltreatment vary depending on cultural or legal jurisdiction. The Center for Disease Control (CDC) provides a concise definition which is widely accepted within the United States. In such, CDC defines child maltreatment as "any act or series of acts of commission or omission by a parent or other caregiver that results in harm, potential for harm, or threat of harm to a child (RT Leeb et al., 2008, p. 11)." Even this definition provides a wide range of interpretation against specific acts which creates confusion and ambiguity for clinicians and policy makers (Capaldi et al., 2019).

Additionally, the CDC identifies four common types of maltreatment including: physical maltreatment, sexual maltreatment, emotional maltreatment, and neglect (*CDC*, 2022). Physical maltreatment includes any deliberate aggressive or violent behavior that results in bodily injury such as hitting, punching, kicking, choking, burning, or shaking (*APA Dictionary of Psychology*, 2022; Prevoo et al., 2017; RT Leeb et al., 2008). Sexual maltreatment includes the use of force (i.e. threats or physical) to violate or exploit those who cannot provide consent in unwanted sexual activities such as rape, fondling, exposure to or participation in sexual activity (*APA Dictionary of Psychology*, 2022; RT Leeb et al., 2008). Emotional maltreatment, sometimes called psychological maltreatment, includes a repeated pattern of deliberate behaviors which are detrimental to the behavioral, emotional and social health and development and overall mental well-being of a youth (*APA Dictionary of Psychology*, 2022; Warmingham et al., 2019). Emotional maltreatment includes verbal assault, denying emotional responsiveness, isolation, corrupting, exploiting, terrorizing, humiliating, harassing or controlling a child (*APA Dictionary*

of Psychology, 2022; APSAC Taskforce, 1995; Hornor, 2012). Neglect often refers to acts of omission in which a failure to meet a child's basic physical and psychosocial needs such as housing, clothing, food, education, medical care, supervision, attention or affection (*APA Dictionary of Psychology*, 2022; RT Leeb et al., 2008). Prevalence of child maltreatment within the United States based on these definitions are discussed next.

Prevalence of Child Maltreatment

Child Protective Services' (CPS) reported receiving referrals for approximately 7.1 million children in 2020 (U.S. Department of Health & Human Services, 2022). For the first time since 2016, a reduction in referrals to CPS for child maltreatment from the previous year occurred. The COVID-19 pandemic school closures denied access to many traditional mandated reporters of child maltreatment including teachers, school nurses and mental health providers (Rodriguez et al., 2021; U.S. Department of Health & Human Services, 2022). Several studies provide evidence that instances of child maltreatment likely rose during the pandemic due to financial hardships and isolation despite the reduction in CPS referrals (Marmor et al., 2021; Rodriguez et al., 2021). Additionally, increases of phone contact with child emergent hotlines and the proportion of traumatic injuries caused by physical abuse may indicate an overall increase in child maltreatment during COVID-19 closures (Kovler et al., 2021; Petrowski et al., 2021). Although the U.S. Department of Health & Human Services 2020 Child Maltreatment report (2022) is limited in scope due to constraints from the COVID-19 pandemic, this report is still the most comprehensive data for child maltreatment in the United States.

CPS responded to 3,144,644 children (17.6% of CPS cases) by means of investigation or alternative response in 2020 (U.S. Department of Health & Human Services, 2022). These cases approximate 4 percent of the entire child population of the United States as experiencing

substantiated child maltreatment during 2020 (U.S. Department of Health & Human Services, 2022). Victimization rate of child maltreatment decreased as children age with children under 1 year of age being the most at risk (U.S. Department of Health & Human Services, 2022). Children aged 11-17 accounted for 28.53% of the total number of maltreated children (U.S. Department of Health & Human Services, 2022). Girls were more likely to be reported for child maltreatment (51.6%) (U.S. Department of Health & Human Services, 2022). Most maltreated youth were one of three racial/ethnic groups White (43.1%), Hispanic (23.6%), or African-American (21.1%). Children from marginalized racial/ethnic groups were over-represented amongst maltreatment reports (U.S. Department of Health & Human Services, 2022).

Prevalence varies by maltreatment type. Of all child maltreatment reports in 2020, 76.1% were neglected, 16.5% were physically abused, 9.4% were sexually abused and 0.2% were sex trafficked (U.S. Department of Health & Human Services, 2022). Additionally, 6.0% of child maltreatment reports were labeled as "other," including threatened abuse or neglect, drug/alcohol addiction, and lack of supervision (U.S. Department of Health & Human Services, 2022). Child maltreatment is more prevalent when certain influencing factors are present. Influencing factors for child maltreatment are discussed next.

Influencing Factors for Child Maltreatment

Influencing factors refers to both protective and risk factors and provides an integrative approach for conceptualizing factors associated with child maltreatment. Influencing factors for child maltreatment include child, parent, family dynamic, and environmental factors. Protective factors are defined as not merely the absence of risk factors, but something additive that reduces the likelihood of child maltreatment (Austin et al., 2020). Limited research specific to protective factors for child maltreatment exists.

Individual child protective factors are defined as resiliency within maltreatment literature (Afifi & MacMillan, 2011). Individual child protective factors include early self-regulation skills, social competence, adaptive functioning, and self-esteem (Afifi & MacMillan, 2011; Austin et al., 2020). Family dynamic protective factors include nurturing and supportive relationships between parents and from other social supports (Austin et al., 2020; Price-Wolf, 2015). Environmental protective factors include neighborhood safety and cohesion, access to health, social and educational services, and legal protection for children (Austin et al., 2020; Maguire-Jack & Showalter, 2016).

Extant literature regarding risk factors for child maltreatment is much more robust. The National Child Abuse and Neglect Data System (NCANDS) collects data on 21 known risk factors including 9 child risk factors and 12 caregiver risk factors (National Data Archive on Child Abuse and Neglect (NDACAN), 2022). Risk of child maltreatment increases by approximately 21% when four or more risk factors are present (J. Brown et al., 1998; Mulder et al., 2018; Wolff et al., 2018). Individual child factors also increase risk of child maltreatment. Despite these risk factors, responsibility for child maltreatment falls solely to the perpetrator. Child risk factors include age younger than four years, temperament, cognitive or physical disability, psychopathology, behavioral difficulties, low social competency and minority racial status (*CDC*, 2022; IJzendoorn et al., 2020; Manly et al., 1994; National Data Archive on Child Abuse and Neglect (NDACAN), 2022; RT Leeb et al., 2008; Stith et al., 2009). Physical or cognitive disability is perhaps the most influential child risk factor with being present for one in four maltreatment allegations (J. Brown et al., 1998; Maclean et al., 2017; Stith et al., 2009). Additionally, child psychopathology is a key factor which increases the risk of maltreatment with children with psychopathology being 3 times more likely to experience maltreatment (Maclean et

al., 2017). Although individual risk factors exist, child maltreatment occurs within family and community contexts (*CDC*, 2022).

Parental risk factors predict child maltreatment more so than child risk factors (Gul & Gurkan, 2018; Mulder et al., 2018; Sidebotham & Golding, 2001). Parental factors associated with increased risk of maltreatment include parental perception of the child, exposure to four or more adverse childhood experiences, level of anger/hyper-reactivity, psychopathology, physical or cognitive disability, problematic substance-use, low resiliency, social isolation, young age, and low socioeconomic status (Butchart et al., 2006; *CDC*, 2022; National Data Archive on Child Abuse and Neglect (NDACAN), 2022; Panisch et al., 2020; Sidebotham & Golding, 2001; Stith et al., 2009; US Preventive Services Task Force et al., 2018). Additionally, maladaptive parental personality traits such as interpersonal dependency, anger, maternal sociopathy, low warmth also increase risk for child maltreatment (Bornstein, 2006; J. Brown et al., 1998; Gul & Gurkan, 2018; IJzendoorn et al., 2020; Kane & Bornstein, 2018). COVID-19 pandemic resulted in the increase of parental risk factors on a global level, specifically parental isolation, increases in psychopathology and financial hardships (Griffith, 2020; Rodriguez et al., 2021).

Family contextual factors associated with increased risk of maltreatment include, multiple young dependent children, low family cohesion, high family conflict, and poor parent-child relationships (*CDC*, 2022; IJzendoorn et al., 2020; Kaur & Kearney, 2013; Stith et al., 2009; US Preventive Services Task Force et al., 2018). Specifically, the two family risk factors with the highest predictive value for child maltreatment are poor marital quality and domestic violence (Bornstein, 2006; J. Brown et al., 1998; IJzendoorn et al., 2020; Stith et al., 2009). Additionally, families with intergenerational trauma are three times more likely to engage in child maltreatment (Assink et al., 2018; Marshall et al., 2022).

Community factors provide a greater understanding of family functioning within a socio-ecological model. Elevated levels of community violence, poverty, lack of community resources and support, and restrictions on social interactions or poor social cohesion place children at higher risk of maltreatment (Butchart et al., 2006; *CDC*, 2022; McLeigh et al., 2018; Rodriguez et al., 2021). Societal and cultural factors place families with marginalized identities at higher risk for child maltreatment and removal from home as a result of historical discrimination (Yi et al., 2020).

Effects of Child Maltreatment

Child maltreatment results in a wide range of enduring adverse effects for biological, psychological, cognitive and educational functioning (Gruhn & Compas, 2020; Mersky & Topitzes, 2010; Panisch et al., 2020; Tyler et al., 2008; van der Put et al., 2018; Zhang et al., 2014). The intensity and longevity of effects vary depending on risk factors, resiliency, severity of trauma and age on onset of maltreatment (Kaplow & Widom, 2007; Mersky & Topitzes, 2010; Yu et al., 2022). The effects of child maltreatment on biological, psychological, cognitive, and educational functioning are discussed next in turn.

Biological Effects. Child maltreatment results in alterations in nearly every bodily system including, neurological, neuropsychological, musculoskeletal, respiratory, cardiovascular, gastrointestinal, gynecological, genitourinary, and metabolic (Cabrera et al., 2020; Carr et al., 2020; Heim, 2018; Warrier et al., 2021). Maltreated children are at increased risk for the development of diabetes, cardiovascular disease, lung cancer, immune-related diseases and chronic pain (Beal et al., 2020; Heim, 2018; Norman et al., 2012; Shonkoff et al., 2012; Warrier et al., 2021). Furthermore, severity of child maltreatment mediates increased cortisol response when exposed to future stressors (Heim, 2018; Ouellet-Morin et al., 2019). Chronic increases in

cortisol lead to response modification in the stress-regulatory system, which in turn results in metabolic dysregulation and increased inflammation (Heim, 2018). Additionally, increased cortisol impacts brain development amongst maltreated children (Herringa, 2017; Majer et al., 2010; Ouellet-Morin et al., 2019).

Maltreated youth are more likely to have persistent dysregulation of the hypothalamic-pituitary-adrenal axis (HPA axis) and the sympathetic nervous system (Cabrera et al., 2020; Ouellet-Morin et al., 2019). Early exposure to traumatic events impacts brain development through the early development of the amygdala and delayed development of other regions, including the dorsal and lateral prefrontal cortex, ventromedial prefrontal cortex (vmPFC), dorsal anterior cingulate cortex (dACC) and hippocampus (Gould et al., 2012; Heim, 2018; Herringa, 2017; Majer et al., 2010). Alterations in volume and structure of these regions persist throughout the lifetime and are responsible for emotion regulation delays, executive functioning, changes in working memory, processing speed, language, visual-spatial abilities, and motor skills (Cabrera et al., 2020; Davis et al., 2015; Gruhn & Compas, 2020; McDermott et al., 2012; Mugge et al., 2016).

Psychological Effects. Child maltreatment increases risk of the development of a wide range of psychopathology (Danese & Widom, 2020; Heleniak et al., 2016; Jaffee, 2017; Maglione et al., 2018; Teicher & Samson, 2013; Vachon et al., 2015). Maltreated youth are at elevated risk of both internalizing and externalizing disorders when both objective and subjective measures of child maltreatment are present as opposed to solely objective measures (Danese & Widom, 2020). Danese & Widom's (2020) findings suggest a youth's appraisal of their experiences to be a significant predictor in the later development of psychopathology. Maltreated youth involved in child welfare are more likely to receive inpatient psychiatric care (Aarons et

al., 2010). Furthermore, past literature identifies maltreatment as a risk factor in the development of externalizing, internalizing, and personality disorders and suicide (Heleniak et al., 2016; Jaffee, 2017; Vachon et al., 2015).

Internalizing disorders that are more prevalent in maltreated youth include posttraumatic stress disorder (PTSD), dissociation, depression, and anxiety disorders (Alisic et al., 2014; Haferkamp et al., 2015; Sperry & Widom, 2013; Teicher & Samson, 2013; Vachon et al., 2015). Youth who experience emotional maltreatment or neglect are more likely to develop internalizing disorders by comparison to other types of maltreatment (Humphreys et al., 2020). Across genders, sexually maltreated male youth are more likely to develop internalizing disorders, whereas physically maltreated female youth are more likely to develop internalizing disorders (Keyes et al., 2012). PTSD is one of the most likely internalizing disorders within maltreated children, with prevalence ranging from 8.8% to 14.5% of maltreated youth meeting diagnostic criteria (Salazar et al., 2013). Sexually maltreated youth are most likely to develop PTSD when compared to other types of maltreatment (Salazar et al., 2013). Dissociation during time of trauma leads to increased risk in the development of avoidance symptoms associated with PTSD (Ross & Kearney, 2017). Prevalence of depressive symptoms ranges from 6.8% to 10.96% of all maltreated youth (Gallo et al., 2017; Lakhdir, Akber Ali, et al., 2021). Depression is most strongly associated with experiences of emotional maltreatment and neglect (Humphreys et al., 2020). Anxiety symptoms may be one of the most common psychological effects of maltreatment with 42.5% of youth with repeated exposure to maltreatment experienced persistent generalized anxiety disorder symptoms lasting 2 years (Gardner et al., 2019; Lakhdir, Peerwani, et al., 2021).

Externalizing disorders that are more prevalent in maltreated youth include attention-deficit/hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), conduct disorder (CD) and substance use disorder (Cicchetti & Handley, 2019; Ford et al., 2000; Horn et al., 2018; McCabe et al., 2005; Ouyang et al., 2008). Across genders, physically maltreated male youth are more likely to develop externalizing disorders whereas sexually maltreated female youth are more likely to develop externalizing disorders (Keyes et al., 2012). Externalizing disorders are frequently associated with impulsivity resulting from limited emotion regulation associated with traumatic experiences which may increase maladaptive, disruptive behaviors (Heleniak et al., 2016; Oshri et al., 2015). Additionally, maltreated children are at increased risk for engaging in risky behaviors, such as risky sexual behaviors, substance use, self-injurious behaviors, suicide attempts, and delinquent behaviors (Angelakis et al., 2019; Capaldi et al., 2019; Gruhn & Compas, 2020; Thompson et al., 2017; Tyler et al., 2008; Wan et al., 2019).

Cognitive Effects. Child maltreatment impacts the development and functioning of several important areas in cognitive functioning. Impairments in working memory, long-term memory, planning, processing speed, executive functioning and attention tasks resulting from maltreatment during childhood emerge during adolescence and persist throughout adulthood (Goltermann et al., 2021; Irigaray et al., 2013; Majer et al., 2010; Nikulina & Widom, 2013). These impairments in global cognitive functioning resulting from child maltreatment are responsible for lower IQ scores amongst maltreated youth (Goltermann et al., 2021; Young-Southward et al., 2020). Furthermore, IQ score mediates the negative effects of child maltreatment on the development of psychopathology during childhood (Harpur et al., 2015).

Additionally, maladaptive cognitive responses to stressors are present among maltreated children across maltreatment types with internalizing symptoms (Heleniak et al., 2016). Such

maladaptive responses include rumination, expressive suppression, and negative cognitions about the self, the world, and traumatic experiences (Foa et al., 1999; Weissman et al., 2019). Maladaptive cognitive responses increases risk for the development of psychopathology including, PTSD, depression, anxiety and substance use disorders (Edalati & Krank, 2016; Münzer et al., 2017).

Educational Effects. Poor educational outcomes exist as both a risk factor and an effect of child maltreatment (Carr et al., 2020; Leiter, 2007; Leiter & Johnsen, 1997; C. K. M. Lo et al., 2017; Thornberry et al., 2014). Conceptualization of educational outcomes as an effect of child maltreatment provides clarity in the comprehensive impact of child maltreatment on school engagement. Child maltreatment impacts educational performance across an array of educational outcomes (Leiter & Johnsen, 1997; Romano et al., 2015). Extant literature has identified worse educational outcomes for maltreated children including decreased academic achievement, increased likelihood of grade retention, increased poor classroom behaviors, increased need for special education, and increased risk for school drop-out (Carr et al., 2020; Daignault & Hébert, 2009; Fantuzzo et al., 2011; Lansford et al., 2002; Leiter, 2007; Leiter & Johnsen, 1997; Romano et al., 2015; Veltman & Browne, 2001). The biological, psychological, and cognitive effects of child maltreatment and their impact on youth's ability to maintain performance in educational settings are discussed next in turn.

Biological Effects and Education. Youth may experience biological effects of maltreatment, which impact nearly every major bodily system (Cabrera et al., 2020; Carr et al., 2020; Heim, 2018; Warrier et al., 2021). These biological effects result in acute and chronic need for increased medical treatment (Lane et al., 2021). Identified risk factors for SAPs and associated poor educational outcomes include physical medical conditions which require routine

medical treatment (Kearney, 2008b). Youth with physical conditions that require routine medical treatment are more likely to miss school and, in turn miss learning opportunities, which increases difficulty in school performance. Additionally, unclean living conditions more likely present in homes with neglect may exacerbate physical conditions (Kearney, 2008b). Frequent absences due to requisite medical care place youth at academic disadvantage and may require additional physical, mental, and emotional strain to "catch-up," in essence creating a cyclical pattern further impacting academic performance (Shiu, 2001). Alterations in brain structures results in decreased cognitive functioning and are discussed as a part of the cognitive effects on education below.

Psychological Effects and Education. Internalizing psychological effects of maltreatment present differently in educational settings by comparison to externalizing psychological effects. Internalizing disorders including those that are most prevalent in maltreated youth (i.e., PTSD, dissociation, depression, and anxiety) impact educational outcomes through maladaptive cognitions, decreased emotion regulation and poor interpersonal relationships (Romano et al., 2015). Internalizing symptoms predicts poorer educational outcomes when mediated by working memory capacity (Evans et al., 2020). PTSD, dissociation, depression and anxiety may increase difficulties in sustaining attention (American Psychiatric Association, 2022). Sustained attention is necessary for school academic achievement (Aronen et al., 2005). Maltreated children with internalizing symptoms may present in school settings as distracted, withdrawn from tasks and peers or may avoid school altogether (Evans et al., 2020; Kearney, 2008b; Romano et al., 2015). Internalizing symptoms and behaviors are typically less visible and are less likely to impact the student-teacher relationship (Roorda & Koomen, 2021).

As a result, maltreated children with internalizing symptoms may be silently struggling without any obvious classroom behaviors for teachers to provide necessary support.

Externalizing disorders including those that are most prevalent in maltreated youth (i.e., ADHD, Oppositional Defiant Disorder (ODD), Conduct Disorder (CD), and substance use disorder) impact educational outcomes through maladaptive behavioral responses frequently associated with impulsivity. Externalizing symptoms are frequently more visible than other psychopathology within educational settings and seen as antisocial, violent, delinquent or risky behaviors (Angelakis et al., 2019; Capaldi et al., 2019; Gruhn & Compas, 2020; Manly et al., 1994; Thompson et al., 2017; Tyler et al., 2008; Wan et al., 2019; Widom, 2014; Zingraff et al., 1993). As a result, youth with externalizing symptoms are more likely to experience punitive consequences from teachers, schools and law enforcement by comparison to their peers (Sheryl et al., 2014; Zingraff et al., 1993). Likelihood of punitive consequences and exclusionary discipline is higher for racial and ethnic minority youth (Pesta, 2022). Punitive consequences including suspension and expulsion, affect a youth's academic performance by limiting educational opportunities and increasing absences from school. Additionally, youth who display externalizing symptoms have poorer student-teacher relationships (Roorda & Koomen, 2021). Student-teacher relationship impacts grades and overall academic achievement, particularly on teacher graded assignments (Roorda & Koomen, 2021; Zimmermann et al., 2013). Poor academic achievement increases externalizing behaviors over time and create a cyclical effect on a youth's ability to engage in educational settings effectively (Zimmermann et al., 2013).

Cognitive Effects and Education. Child maltreatment impacts several critical areas in cognitive functioning which are essential for school success including working memory, long-term memory, planning, processing speed, executive functioning, and attention (Goltermann et

al., 2021; Irigaray et al., 2013; Majer et al., 2010; Nikulina & Widom, 2013). These alterations in cognitive functioning are likely attributable to the shifts in development of structural areas in the brain (Cabrera et al., 2020; Davis et al., 2015; Gruhn & Compas, 2020; McDermott et al., 2012; Mugge et al., 2016). Low working memory may increase risk for reduced academic performance, attention and behavioral difficulties (Aronen et al., 2005). Additionally, processing speed and executive functioning are unique predictors of school achievement (Dodonova & Dodonov, 2012; Samuels et al., 2016). The alterations in brain development caused by child maltreatment and the associated difficulties in global cognitive functioning directly place maltreated youth at increased risk for reduced academic achievement. Further effects on educational functioning likely occur a result of repeated disruption in home placement for maltreated youth. Existent literature is limited in understanding the effects of removal from home in maltreated youth and are discussed next.

Effects of Removal from Home

Maltreated youth frequently endorse removal from home as an additional traumatic experience and a subset of those youth identify removal from home as the most traumatic event (Wechsler-Zimring et al., 2012). Additionally, youth who experience emergent home removal demonstrate significant increases in reported stress at 1 week post-removal by comparison to youth who had a planned removal (Baugerud & Melinder, 2012). Emergent home removal results in increased symptoms and impacts of traumatic experiences for maltreated youth. Point prevalence of internalizing disorders is significantly higher for youth in residential care by comparison to all maltreated youth (i.e., 35% for PTSD; 37.0% for depressive disorders; and 34.0% for anxiety disorders) (Moussavi et al., 2022). Furthermore, maltreated youth who experience home removal may also experience removal from or limited access to existing

protective factors including family, community, social, cultural and school supports (Romano et al., 2015). Maltreated youth placed in kinship care demonstrated decreased risk of psychiatric disorders, behavioral problems, less disrupted placements, institutional maltreatment, retention of grade level and increased reading scores (Winokur et al., 2014). Maintaining existing family, social and cultural supports allows for better outcomes for maltreated youth (Winokur et al., 2014). Home displacement frequently results in removal from school, which likely impacts a youth's school attendance. School attendance/problems as currently understood within existent literature are discussed in detail to provide increased understanding of their overall impact.

School Attendance/Problems

Governing state and local policies typically define absenteeism as problematic and identify cutoffs between 10-20% days of school missed (Kearney, 2021; U.S. Department of Education, 2019). Much of the scientific literature on SAPs utilizes a cutoff of 10% of days of school missed (Gentle-Genitty et al., 2015; Kearney, 2021; Kirksey, 2019). However, cutoffs in defining SAPs continue to be challenged and debated (Bacon & Kearney, 2020; Kearney et al., 2019a; Kearney, 2021; Skedgell & Kearney, 2018). As a result, definitions of SAPs vary depending on disciplines and conceptualization of school attendance problems (Kearney et al., 2019a; Maynard et al., 2015). Distinct yet overlapping disciplines contributing to the study of school attendance/problems extend to criminal and juvenile justice, education, psychological sciences, medical health sciences, public and educational policy and social work (DePaoli et al., 2018; Elliott & Place, 2019; Kearney, 2021; Rocque et al., 2017). Each discipline utilizes varying definitions, constructs, and frameworks, resulting in confusion across findings and future directions (Maynard et al., 2015). Further confusion arises as a result of the heterogeneity across profiles of SAPs, accounting for youth demographics, behaviors, and risk factors (Kearney &

Graczyk, 2020a). Researchers such as Kearney (2021) propose an integrative framework between systemic and analytic approaches to reduce confusion across disciplines and provide a synergistic understanding of existent findings.

Systemic approaches tend to utilize dimensional orientations when investigating SAPs. Researchers employing systemic approaches frequently come from backgrounds in juvenile justice, education, policy, social work, or sociology which impacts the factors examined and models employed (Kearney, 2021). Systemic approaches examine broad, overarching contexts, perspectives, interactions and factors (Kearney, 2021; Kearney & Graczyk, 2020a). As such, systemic approaches view SAPs along a continuum, while focusing on those students with the most chronic SAPs (Owen, 2014). Little emphasis is placed on any specific reason for missing school within a systemic approach (Kearney, 2021).

In contrast, analytic approaches primarily utilize categorical orientations when investigating SAPs (Kearney, 2008b, 2021). Researchers employing analytic approaches frequently come from medicine, nursing, psychiatry, or psychology disciplines, which impacts the factors examined and the models employed (Kearney, 2021). Analytic approaches examine specific contexts, perspectives, interactions and factors impacting school attendance (Kearney, 2021). Resulting approaches view SAPs and youth within defined groups while focusing on acute SAPs (Owen, 2014). Types of daily absence can be evaluated to provide a specific intervention to remedy SAPs through an analytic approach (Cook et al., 2017; Ingul et al., 2019; Kearney, 2016; Kearney et al., 2019b). The present study employed a dimensional approach to identify predictors of SAPs on a continuum for maltreated youth. Furthermore, extrapolation using dimensional constructs better aligns with constructs utilized in public policies for maltreated youth removed from their home.

Prevalence of School Attendance Problems

Variations in definitions have resulted in a wide range (1% - 28%) of prevalence rates of problematic SAPs (Allen et al., 2018; Balfanz & Byrnes, 2012; Epstein & Sheldon, 2002; Musu-Gillette et al., 2016). However, the U.S. Department of Education (2019) reports 16% of the student population as chronically absent (i.e., missing 15 or more days of school). Racial and ethnic minorities experience SAPs at disproportionate rates. Specifically, Native American were the most likely ethno-racial group of students to experience SAPs, with 26.0% of all Native American students reported as chronically absent. Pacific Islander (22.6%), Black (20.5%), multiracial (18.4%), and Hispanic (17.0%) students experience disproportionate rates of school SAPs (U.S. Department of Education, 2019). Additionally, students with disabilities are 1.5 times more likely to be chronically absent than their peers without disabilities (U.S. Department of Education, 2019). Students are more likely to be chronically absent as they progress throughout their academic career with the highest frequencies amongst high school students (21.1% of all students), followed by middle school students (14.1%) and finally elementary school students (13.6%) (U.S. Department of Education, 2019). Furthermore, students are more likely to be chronically absent as they progress throughout high school with increases from 14% of students in 10th grade to 15% of students in 12th grade (Gubbels et al., 2019).

The COVID-19 pandemic impacted attendance in education for all students in the United States. Declines in attendance and academic growth were present across the majority of students. Existing systemic barriers exacerbated pre-pandemic disparities in academic achievement for students of color. Disparities in access to technology, instructors, mental health services, illness, loss and economic hardship disproportionately impacted students of color during the COVID-19 pandemic (Department of Education, 2021; Kearney & Benoit, 2022). As a result, students of

color were less likely to gain access to education and were more likely to be absent from school in the form of both in person instruction or distance learning compared to their white peers. Additionally, students with disabilities faced increased difficulty in gaining necessary access to educational modifications through IEP plans. Only 20% of parents of students with disabilities reported receiving IEP services during the pandemic. Parents of students with disabilities were twice as likely as their peers to report their child as doing little to no remote learning and to report that distance learning was not going well (Department of Education, 2021). The full impacts of the COVID-19 pandemic on school attendance and associated problems are still unknown. Influencing factors that increase the likelihood of SAPs are discussed next.

Influencing Factors for School Attendance/Problems

Influencing factors refer to both protective and risk factors and provides an integrative approach for conceptualizing factors impacting a youth's school attendance (Kearney, 2021). Influencing factors for increased school attendance problems (SAPs) include child, parent, family, community and school factors (Filippello et al., 2019; Gubbels et al., 2019; Kearney, 2008b). Limited literature exists examining protective factors against SAPs. Known protective factors against SAPs include parental involvement, parental and peer support and acceptance, and community resources (Bartz et al., 2018; Battin-Pearson et al., 2000; Duke, 2020; Marlow & Rehman, 2021; Pengpid & Peltzer, 2019). Research to date has primarily focused on risk factors associated with SAPs.

Individual child factors associated with increased SAPs include mental and physical health conditions, engaging in risky behaviors, and life events (Gubbels et al., 2019; Kearney, 2008b; Leiter & Johnsen, 1997). Youth with internalizing and externalizing psychopathology are more likely to miss school than their peers as a direct result of managing mental health (Gubbels

et al., 2019; Kearney, 2008b; Lawrence et al., 2019). Additionally, youth with personality disorder characteristics are also at an increased risk of SAPs (Gubbels et al., 2019). Youth engaging in disruptive classroom behaviors are more likely to experience SAPs due to a myriad of reasons including disciplinary actions, individual behaviors or underlying psychopathology (Kearney & Graczyk, 2020a; D. H. Stone & Stone, 2011). Increased risk of SAPs also occurs amongst youth with a wide array of medical conditions due to associated symptoms and healthcare needs (Department of Education, 2021; Gubbels et al., 2019; Kearney, 2008b). Life experiences including adverse childhood experiences, maltreatment, removal from home, and involvement in the child welfare increase risk of SAPs (Duke, 2020; Hagborg et al., 2018; Leiter, 2007; Leiter & Johnsen, 1997; Stempel et al., 2017). The role of child maltreatment, subsequent removal from home and SAPs are discussed further in the child maltreatment and school attendance problems section.

Parental risk factors associated with increased risk of SAPs include parent individual factors, parenting style, and quality of parent-child interactions (Gubbels et al., 2019). Individual parent factors associated with a reduction in youth's school attendance include mental and physical health, parent academic achievement, and parent unemployment status (Gubbels et al., 2019; McShane et al., 2001; Wood et al., 2012). Parenting problems and difficulties including low levels of parent control, ineffective/harmful parenting styles (i.e., permissive, negligence, physical punishment, and maltreatment) and low parent school involvement (Deslandes et al., 1997; Gubbels et al., 2019; Joronen & Åstedt-Kurki, 2005; Maclean et al., 2016). Additionally, relational factors include low levels of parental support and acceptance, parent self-efficacy, relationship conflict and poor parent-child relationships increase risk of SAPs (Carless et al., 2015; Gubbels et al., 2019; Sheppard, 2005).

Family factors associated with increased SAPs include socio-economic status (SES), family dynamics, and relationships within the family (Gubbels et al., 2019; Kearney, 2008b; Kearney et al., 2019a). Youth from families with a low SES are at increased risk of SAPs (Gubbels et al., 2019; Kearney, 2008b). Family dynamics such as conflict, enmeshment, isolation, detachment, ineffective family system (e.g., cohesion, adversity or family disruptions) and expressiveness increase risk of SAPs (Epstein & Sheldon, 2002; Kearney, 2008b; Kearney et al., 2019b; Sheldon & Epstein, 2004). Additionally, relationships within the family system including family size, number of parents, and extended family impact school attendance (Gubbels et al., 2019; Kearney, 2008b; Romero & Lee, 2008).

Community factors associated with increased SAPs include lack of access to resources, poverty, community safety and cultural barriers (Allen et al., 2018; Kearney, 2008b; Sugrue et al., 2016). Lack of access to resources including transportation, stable housing, food, appropriate child care increases risk of SAPs (Allen et al., 2018; Kearney, 2008b; Kearney & Graczyk, 2020a; Romero & Lee, 2008; Sugrue et al., 2016). Exposure to community violence is associated with SAPs (Allen et al., 2018; Rankine et al., 2022; Stempel et al., 2017). Cultural barriers within communities and neighborhoods may impact a youth's school attendance through perceived belonging or access to positive social supports (Allen et al., 2018).

School factors associated with increased SAPs include school resources, school climate and instructional practices. Lack of access to school resources including, after school programs, quantity and quality of teachers, appropriate building conditions, access to school supplies and individualized resources for marginalized youth increase likelihood of SAPs (Allen et al., 2018; Cooley-Strickland et al., 2011; Greytak et al., 2013; Kearney, 2008b; Kearney & Graczyk, 2020a; Reid, 2005; Simons et al., 2010). Furthermore, teacher-parent and teacher-student

relationships, inadequate or too rigorous curriculum, and ineffective instruction increase risk of SAPs for students (Kearney, 2008a; Vervoort et al., 2014). Additionally, trauma informed teaching practices reduce SAPs within trauma exposed youth (Jennings, 2019). Poor school climate (i.e., bullying, violence, discrimination, rigid disciplinary practices, and student-teacher conflict) increases risk of SAPs (Bacon & Kearney, 2020; Gubbels et al., 2019; Kearney, 2008b, 2008a).

Effects of School Attendance/Problems

SAPs result in a wide range of adverse effects for educational, behavioral, psychological, and socio-emotional functioning (Fornander & Kearney, 2020; Gottfried, 2014; Kearney, 2019; Smerillo et al., 2018; Wood et al., 2012). Educational impacts are perhaps some of the most apparent adverse effects of chronic SAPs. Youth who have experienced SAPs at any point during their education are at increased risk for SAPs throughout the remainder of their education (Wood et al., 2012). Additionally, a reduction in both acute and chronic academic achievement may result from SAPs (Balkis et al., 2016; Carlton et al., 2021; Carroll, 2010; Krenitsky-Korn, 2011; Moonie et al., 2008; Smerillo et al., 2018). Furthermore, SAPs during elementary and middle school significantly predict delayed graduation or school dropout resulting in lower levels of completed education (Epstein & Sheldon, 2002; Smerillo et al., 2018). Highest level of completed education impacts SES, mental and physical health outcomes, and quality of life (Araya et al., 2003; Beckles et al., 2013; Leopold, 2018; Luo & Waite, 2005; Villas-Boas et al., 2019). The educational effects from SAPs during childhood impact many areas of functioning throughout the lifetime.

Psychopathology, including both internalizing and externalizing disorders, increases risk of developing SAPs (Fornander & Kearney, 2020; Kearney, 2019). Internalizing problems

including anxiety disorders, fear, depression, social withdrawal and low self-esteem impact SAPs across varying severity levels (Egger et al., 2003; Fornander & Kearney, 2020; Gonzálvez et al., 2019; Holtes et al., 2015; Maynard et al., 2015). Risk of externalizing problems including conduct, substance, social, physical aggression, running away from home or school, non-compliance, disruptive behavior at school increases with SAPs (Gottfried, 2014; Ingul et al., 2019; Kearney, 2019). SAPs predict psychopathology, reduced independence, delinquency and occupational difficulties into adulthood (Flakierska-Praquin et al., 1997; McCune & Hynes, 2005; Rasasingham, 2015). Many of the influencing factors and effects of SAPs overlap with influencing factors and effects of child maltreatment. The relationship between SAPs and child maltreatment are discussed next to provide a theoretical framework of the mechanisms in which maltreated youth are at increased risk in developing SAPs.

Child Maltreatment and School Attendance/Problems

Maltreated youth removed from their home are at increased risk for developing SAPs and are vulnerable to the effects of SAPs (Kearney, 2008b). Maltreated youth may be absent from school for a myriad of reasons including educational neglect, parental attempts to conceal maltreatment, physical or mental health concerns resulting from maltreatment, or logistic delays from removal from home (Kearney, 2008b).

Prevalence of School Attendance/Problems within Maltreated Youth

The exact prevalence of school attendance/problems within maltreated youth is unknown. However, maltreated youth are at increased risk and have 4.1 times more unexplained or problem absences than their non-maltreated peers (Armfield et al., 2020). Youth who experience maltreatment at earlier ages are more likely to experience SAPs (Armfield et al., 2020). Hagborg et al. (2018) found that the prevalence of child maltreatment increased across levels of SAPs

(i.e., no, moderate and excessive absences). Conflicting information exists on whether involvement with CPS and alternative home placements improves or reduces acute school attendance (Armfield et al., 2020; Conger & Finkelstein, 2003; Font & Maguire-Jack, 2013; O'Higgins et al., 2017; Runyan & Gould, 1985). However, long-term risk for reduced school attendance increases for maltreated youth (Leiter, 2007; O'Higgins et al., 2017). Existing conceptualizations and models seek to reconcile the mechanisms through which maltreated youth are at increased risk for SAPs.

Conceptualization and Models of Child Maltreatment's Impact on School

Four potential conceptualizations through which child maltreatment influences school outcomes exist: social learning, developmental, traumagenic, and behavior modification. First, social learning theory suggests maltreated youth may generalize learned behaviors from their home life while present in school, which may emerge as disruptive behaviors (Alink et al., 2019; Iverson & Segal Marilyn M, 1990; Leiter & Johnsen, 1997). Second, developmental theory suggests that physical and cognitive effects of maltreatment on youth development impact their ability to engage in school work effectively (Erickson et al., 1989; Leiter & Johnsen, 1997; Romano et al., 2015). Third, the traumagenic approach suggests the socio-emotional effects of maltreatment on youth alters self-esteem, self-efficacy, and ways youth interact with peers, adults and authority figures (Cantón-Cortés et al., 2012; Finkelhor & Browne, 1985; Leiter & Johnsen, 1997). Lastly, behavior modification theory suggests physical maltreatment associated with punishments at home diminishes a youth's ability to engage with their environment effectively, impeding learning (Leiter & Johnsen, 1997; Skinner, 2002). Leiter and Johnsen (1997) completed an event-history analysis which supported elements in each of these conceptualizations. Elements present across these conceptualizations are likely responsible for

the associations between poor school outcomes, including SAPs and child maltreatment. A comprehensive and integrative approach is needed to best understand the impact of child maltreatment on school outcomes.

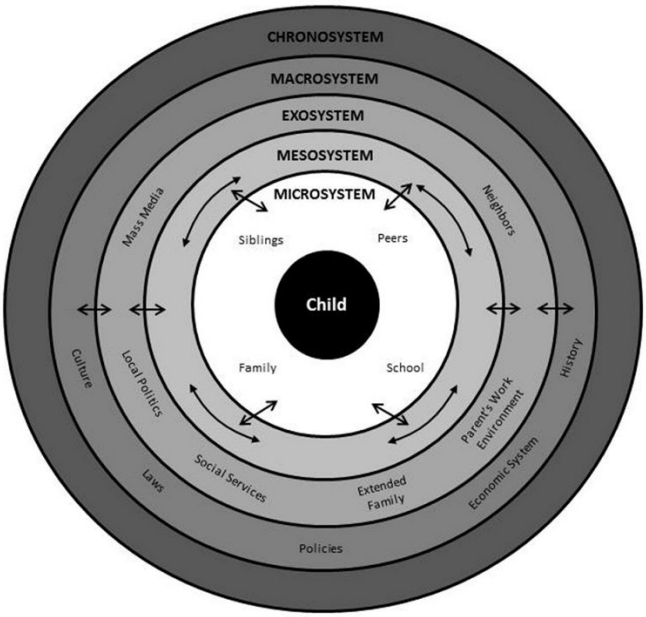
Bronfenbrenner's ecological model for maltreated youth. Perhaps, Bronfenbrenner's ecological model (1977) provides the best framework to best understand the interplay of school, family and government systems and the cascading impact of the disruption of those systems relating to maltreated youth and SAPs. The ecological model allows for increased understanding of the interplay between and among five nested systems (i.e., micro-, meso-, exo-, macro-, and chrono-) (Sabri et al., 2013).

For a youth not involved with CPS, elements within the microsystem directly influence the youth located at the center of the ecological model (Figure 1). Microsystems refer to immediate elements surrounding a youth including home life, school, neighborhood, immediate family, church, peers and mentors. Developmentally, the microsystem will grow and change as a youth goes through childhood and adolescence (Bronfenbrenner, 1977). Youth develop skills to navigate specific microsystems and generalize these skills as they interact with new microsystems and mesosystems (Kilanowski, 2017). The mesosystem within the ecological model consists of interactions between elements within the microsystems surrounding a youth. The exosystem refers to systems that indirectly exert influences on the youth including community contexts, parent's workplace, social networks, media, local politics and social services (Bronfenbrenner, 1977; Kilanowski, 2017; Richardson et al., 2018). The macrosystem includes societal, religious, cultural values, economics, national laws and policies which indirectly influences the youth through impacts on the exo-, meso-, and microsystems. Lastly,

the chronosystem provides a greater understanding of the historical context within the overall ecological system (Bronfenbrenner, 1977).

Figure 1

Model of Non-CPS Involved Youth Development



Note. (Richardson et al., 2018).

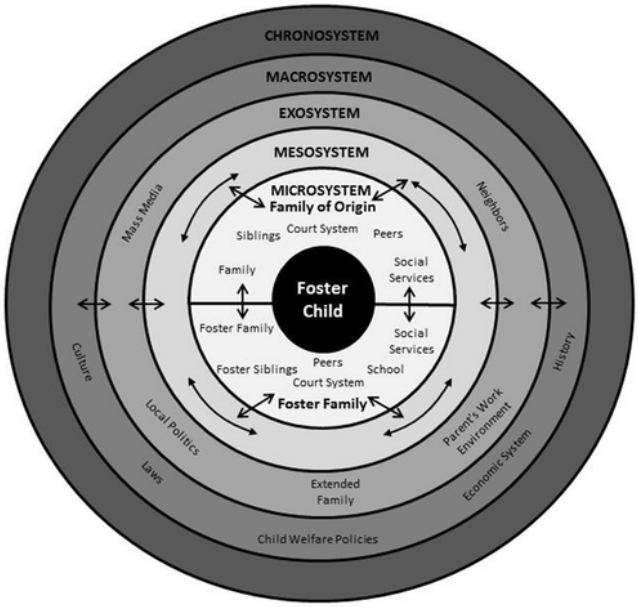
Disruption of this model occurs when CPS removes a maltreated youth from their home. Richardson et al. (2018) provide a revised ecological model which provides a theoretical understanding of how this model shifts when CPS removes a youth from their home (Figure 2). Further complexities and integration of systems occurs as the number of home displacements increases for maltreated youth (Crum, 2010). When a maltreated youth becomes involved with CPS, elements found within the exosystem move inwards to the microsystem and exert increased

influence on the youth (Richardson et al., 2018). Specifically, the court system and social services become directly present within the youth's life as a part of the microsystem (Richardson et al., 2018).

Additionally, new elements incorporated into a maltreated, CPS involved youth including foster families, adoptive families, emergency group homes, and social workers (Milner, 1987; Richardson et al., 2018). These new elements create a dual-microsystem in which a reduction of individual power occurs as a result of the shift of influence of each element within the system (McGregor et al., 2021). Additionally, when maltreated youths are removed from their homes, they are also potentially removed or have limited access to known protective factors, including community mentors, peers, and family members. Furthermore, some elements may shift including new schools, neighborhoods, churches, peers and mentors. Each time a maltreated, CPS involved youth experiences a home displacement, additions, removal or shifts occur in the elements within the microsystem. As these elements shift, each home displacement increases risk of externalizing, internalizing and attachment disorders, which in turn, decreases probability of future placement stability (Carnochan et al., 2013).

Figure 2

Model of CPS Involved Youth Development



Note. (Richardson et al., 2018).

SAP's within Bronfenbrenner's ecological model for maltreated youth. Influencing factors for experiencing both maltreatment and SAPs occur between all systems (i.e., micro-, meso-, exo-, macro- and chrono-) within the ecological model. Many influencing factors overlap between maltreatment and SAPs including parent and child characteristics, family dynamic and environmental factors. Other influencing factors interact in ways that either increase or decrease risk of SAPs amongst maltreated youth. Instability within the microsystem of maltreated, CPS involved youth has the potential to impact risk factors for SAPs including parent, individual, family, community, and school factors. Displacement of a maltreated youth begins a cascade effect across the meso-, exo-, and macrosystems stemming from the microsystem and increasing overall risk of SAPs (Kearney, 2008b). Many influencing factors and effects of child

maltreatment and SAPs overlap and exponentially increase risk for each other through the intricacies of these changes in the microsystem. The interactions of influencing factors between child maltreatment and SAPs are discussed in the next section.

Interactions of Influencing Factors of Child Maltreatment & School Attendance/Problems

Child maltreatment and SAPs share many risk factors across individual child, parent, family, and community factors. Due to the limited research regarding protective factors for both child maltreatment and SAPs, community resources are the only identified overlapping protective factor (Austin et al., 2020; Maguire-Jack & Showalter, 2016; Pengpid & Peltzer, 2019). Research regarding risk factors is robust and therefore offers further clarity into factors which may place a youth at higher risk for both child maltreatment and SAPs.

Individual child risk factors present for both child maltreatment and SAPs include cognitive or physical disabilities, psychopathology, and minority racial status (Gubbels et al., 2019; IJzendoorn et al., 2020; Kearney, 2008b; National Data Archive on Child Abuse and Neglect (NDACAN), 2022; RT Leeb et al., 2008). Parent risk factors present for both child maltreatment and SAPs include psychopathology, harsh parenting styles, and parent employment status (Kearney, 2008b; C. Lo et al., 2019; McShane et al., 2001; National Data Archive on Child Abuse and Neglect (NDACAN), 2022; Stith et al., 2009; US Preventive Services Task Force et al., 2018). Family risk factors present for both child maltreatment and SAPs include low family cohesion, high family conflict, low socioeconomic status (SES), and family size (*CDC*, 2022; Gubbels et al., 2019; IJzendoorn et al., 2020; Kaur & Kearney, 2013; Kearney, 2008a; Kearney et al., 2019a; Stith et al., 2009; US Preventive Services Task Force et al., 2018). Community risk factors present for both child maltreatment and SAPs include elevated levels of community violence, poverty, lack of access to resources, and socio-cultural barriers (Allen et

al., 2018; Butchart et al., 2006; *CDC*, 2022; Kearney, 2008b; Kearney & Graczyk, 2020a; McLeigh et al., 2018; Rankine et al., 2022; Rodriguez et al., 2021; Sugrue et al., 2016). Furthermore, elements within the macrosystem increase risk for both child maltreatment and SAPs due to historical and present systemic discrimination, such as minority racial status and low socioeconomic status (Kearney, 2008b; Kearney & Benoit, 2022; Yi et al., 2020). Multiple risk factors of SAPs are likely already present for any maltreated youth.

Additionally, SAPs may alert educators that child maltreatment may be occurring. Parents may restrict youth from going to school in efforts to conceal physical indicators of maltreatment (Kearney, 2008b). Maltreated youth may require more days at home to recover from frequent injuries resulting from maltreatment (Kearney, 2008b). Educators may utilize SAPs as an opportunity to inquire about child welfare. Additionally, some parents engaging in neglect may not provide their child access to schooling through a lack of transportation or information regarding their education. Educational neglect is a form of maltreatment in some states (Kearney, 2008b).

Identifying which occurs first proves challenging while detangling reasons for absences and associated risk factors. However, as the number of risk factors increases for child maltreatment, so does the number of risk factors for developing of SAPs. When this occurs, maltreated youth may be increasingly vulnerable to experiencing the widespread, life-long effects of both child maltreatment and SAPs.

Existent literature demonstrates that maltreated youth are at increased risk for SAPs and poor academic outcomes (Stempel et al., 2017). Amplifying these risks, removal from home, and child welfare involvement increase risk of developing SAPs and poor academic outcomes (Duke, 2020; Hagborg et al., 2018; Leiter, 2007; Leiter & Johnsen, 1997; Stempel et al., 2017). Utilizing

Bronfenbrenner's socio-ecological model suggests conceptualization in why CPS-involved maltreated youth experience increased risk for SAPs lies within the significant alterations to their microsystem (Richardson et al., 2018). The shifting exposure to risk factors and access to protective factors may inform the increased risk for SAPs. Ultimately, removal from home furthers the complex impact of influencing factors associated with both child maltreatment and SAPs. The present study examined how the number of home displacements impacts SAPs and associated school outcomes (i.e., classroom behavior, academic achievement and school attendance) to provide clarity in the conceptualization of maltreated youth and potential SAPs. School outcomes including classroom behavior and academic achievement both influence and are influenced by SAPs. The relationship of these constructs within CPS involved youth are discussed in the next section.

School Attendance/Problems & Associated School Outcomes for CPS Involved Youth

SAPs, classroom behaviors and academic achievement interrelate and influence each other (Balkis et al., 2016; Carlton et al., 2021; Carroll, 2010; Kearney & Graczyk, 2020a; Krenitsky-Korn, 2011; Moonie et al., 2008; Smerillo et al., 2018; D. H. Stone & Stone, 2011). Poor classroom behavior and academic achievement frequently is a precipitating factor for SAPs (Kearney & Graczyk, 2020a; D. H. Stone & Stone, 2011). Additionally, SAPs may increase poor classroom behavior and decrease academic achievement (Balkis et al., 2016; Carlton et al., 2021; Carroll, 2010; Gottfried, 2014; Ingul et al., 2019; Kearney, 2019; Kearney & Graczyk, 2020a; Smerillo et al., 2018; D. H. Stone & Stone, 2011). CPS involved youth are more likely to experience poor academic outcomes, including increased disruptive classroom behaviors and lower standardized and grade academic achievement (Berger et al., 2015; Leiter, 2007; Yoon et

al., 2021; Zima et al., 2000). Classroom behavior and academic achievement within CPS involved youth are discussed next.

Classroom Behavior in CPS Involved Youth

CPS involved youth engage in disruptive classroom behaviors more frequently than their non-CPS involved peers (Zima et al., 2000). Additionally, foster parent's perception of behavioral difficulties relate to increased disciplinary actions taken by schools including suspension and/or expulsion (Zima et al., 2000). Specifically, CPS involved youth are three times more likely to experience disciplinary actions taken by schools than their non-CPS involved peers (Pears et al., 2012; Scherr, 2007). Disruptive classroom behaviors correlate with the number of school changes in CPS involved youth (T. P. Sullivan et al., 2006). School changes in CPS involved youth likely result from home displacement within the foster care system (T. P. Sullivan et al., 2006). Frequent school changes and disciplinary actions may decrease youth's overall school attendance and likely continue to perpetuate poor academic outcomes for CPS involved youth.

Academic Achievement in CPS Involved Youth

CPS involved youth display reduced academic achievement regardless of substantiation of maltreatment (Berger et al., 2015; Leiter, 2007; Stahmer et al., 2009; Yoon et al., 2021). Specifically, CPS involved youth experience reductions in math and reading achievement scores more frequently than their non-CPS involved peers (Berger et al., 2015; Johnson et al., 2021; Piescher et al., 2014; Romano et al., 2015). Additionally, one-third of CPS involved youth display below-average cognitive scores on standardized testing and lower grade point averages be comparison to the general student population (Johnson et al., 2021; Romano et al., 2015). Sullivan et al. (2006) identified almost 50% of CPS involved youth as being behind their

expected grade by their age. Placement stability likely plays an important role in academic achievement for CPS involved youth, with increased placement stability positively impacting academic success (Romano et al., 2015). Limited existent literature examines placement stability on measures of academic achievement in CPS involved youth (Romano et al., 2015). Further limitations within existent literature as they pertain to the current study are discussed next.

Limitations of Existent Literature

The majority of existent literature regarding SAPs in maltreated youth has focused on chronic, overall effects of maltreatment on school outcomes (Armfield et al., 2020; Davis et al., 2015; Fantuzzo et al., 2011; Hagborg et al., 2018; Leiter & Johnsen, 1997). Few studies have examined the acute impacts of child maltreatment on SAPs (Leiter, 2007). Limited conflictual literature exists regarding the impact of displacement from home on academic functioning. Research to date is unclear how removal from home acutely influences SAPs and other academic outcomes (Conger & Finkelstein, 2003; Font & Maguire-Jack, 2013; Leiter, 2007; O'Higgins et al., 2017; Runyan & Gould, 1985). Furthermore, limited existent literature examines the compounding impacts of multiple placement disruptions on SAPs and other academic outcomes. The present study examined the impact of placement disruptions on school outcomes associated with SAPs including school attendance, school achievement, and classroom behaviors and provided policy recommendations to reduce risk of poor academic outcomes in maltreated youth.

Purpose of the Present Study

The current study examined the relationship between the number of transfers in housing and the impact on school outcome variables relating to SAPs (i.e., classroom behavior, academic achievement, school attendance). The literature on the acute impact of transfers in housing on school outcomes is sparse and mixed. Much of the extant literature has focused on how traumatic

experiences impact school functioning (Stempel et al., 2017). However, transfers in housing likely further perpetuate harm and impact school functioning beyond the impact of traumatic experiences (Leiter, 2007; O'Higgins et al., 2017; Richardson et al., 2018). The present study addressed shortcomings in current literature and examined how multiple transfers in housing impact school functioning (i.e., classroom behaviors, school achievement, school attendance) for maltreated youth. Findings from the present study may be used to inform policy and CPS interventions specific to maltreated youth and transfers in housing.

Hypotheses

Hypothesis 1 was that a significant relationship would be found between impairment across school outcome variables as measured by clinician's scoring on the NV-CANS school module and the number of lifetime transfers in housing. These findings were expected to hold true while controlling for the number of placements in the 6 months and 1 year prior to the assessment date. This hypothesis comprised three main elements based on type of school outcome.

Hypothesis 1a was that a significant relationship would be found between clinician's ratings of disruptive classroom behaviors as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH1) and the number of lifetime transfers in housing. Greater impairment with respect to disruptive classroom behaviors was expected to be associated with increased number of lifetime transfers in housing.

Hypothesis 1b was that a significant relationship would be found between clinician's ratings of poor school achievement as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH3) and the number of lifetime transfers in housing. Greater impairment with

respect to school achievement was expected to be associated with increased number of lifetime transfers in housing.

Hypothesis 1c was that a significant relationship would be found between clinician's ratings of school attendance impairment as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH4) and the number of lifetime transfers in housing. Greater impairment with respect to school attendance was expected to be associated with increased number of lifetime transfers in housing.

Hypothesis 2 was that a significant relationship would be found between clinician's ratings of impairment across school outcome variables and the number of lifetime transfers in housing and a youth's demographic variables (i.e., race, gender, age, longevity in DFS, assessed before or after COVID-19 shutdown). This hypothesis comprised three main elements based on type of school outcome.

Hypothesis 2a was that a significant relationship would be found between clinician's ratings of disruptive classroom behaviors as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH1) and the number of lifetime transfers in housing and a youth's demographic variables (i.e., race, gender, age, longevity in DFS, assessed before or after COVID-19 shutdown). Greater impairment due to disruptive classroom behaviors was expected to be associated with increased age, non-white racial identities, female gender identity, longer DFS involvement, and assessment after the COVID-19 shutdown.

Hypothesis 2b was that a significant relationship would be found between clinician's ratings of poor school achievement as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH3) and the number of lifetime transfers in housing and a youth's demographic variables (i.e., race, gender, age, longevity in DFS, assessed before or after

COVID-19 shutdown). Greater impairment due to school achievement was expected to be associated with increased age, non-white racial identities, female gender identity, longer DFS involvement, and assessment after the COVID-19 shutdown.

Hypothesis 2c was that a significant relationship would be found between clinician's ratings of school attendance impairment as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH4) and the number of lifetime transfers in housing and a youth's demographic variables (i.e., race, gender, age, longevity in DFS, assessed before or after COVID-19 shutdown). Greater impairment within school attendance was expected to be associated with increased age, non-white racial identities, female gender identity, longer DFS involvement, and assessment after the COVID-19 shutdown.

Hypothesis 3 was that a significant relationship would be found between impairment across school outcome variables as measured by clinician's scoring on the NV-CANS school module and the number of lifetime placements within high-risk settings (i.e., inpatient psychiatric treatment facilities, and detention centers). This hypothesis comprised three main elements based on type of school outcome.

Hypothesis 3a was that a significant relationship would be found between clinician's ratings of disruptive classroom behaviors as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH1) and the number of lifetime placements within high-risk settings (i.e., inpatient psychiatric treatment facilities and detention centers). Greater impairment due to disruptive classroom behaviors was expected to be associated with increased number of lifetime placements within high-risk settings.

Hypothesis 3b was that a significant relationship would be found between clinician's ratings of poor school achievement as measured by the NV-CANS school module (Appendix 1:

Module 5, Item SCH3) and the number of lifetime placements within high-risk settings (i.e., inpatient psychiatric treatment facilities and detention centers). Greater impairment within school achievement was expected to be associated with increased number of lifetime placements within high-risk settings.

Hypothesis 3c was that a significant relationship would be found between clinician's ratings of school attendance impairment as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH4) and the number of lifetime placements within high-risk settings (i.e., inpatient psychiatric treatment facilities and detention centers). Greater impairment within school attendance was expected to be associated with increased number of lifetime placements within high-risk settings.

CHAPTER 3

METHOD

Participants

The present study included 170 youths aged 10-17 years who resided in a group shelter in the Las Vegas area following emergent removal due to physical maltreatment, sexual maltreatment, exposure to domestic violence, and/or neglect and subsequent placement in Department of Family Services (DFS) custody. Data collection included a combination of direct assessment and DFS record reviews. An initial sample of 235 youth participated in the study but several were removed due to missing information on total number of lifetime placements (n = 3), racial identity (n = 2), or main NV-CANS outcome variables (n = 60). Final participants had a mean age of 13.92 years (SD = 1.80) (Table 1) and identified as female (n = 84), male (n = 81), transgender female (n = 2), and non-binary (n = 1). Participants identified as Black (40.6%), Multiracial (20.6%), White (18.8%), Hispanic/Latinx (12.4%), or Other (7.6%) (Table 2). Participants' lifetime number of placements ranged from 1 to 63 placements with a mean of 9.32 placements (SD = 9.60) (Table 3). Participants' number of placements 6 months prior to assessment date ranged from 1 to 13 with a mean of 3.21 (SD = 2.24) (Table 4). Participants' number of placements 1 year prior to assessment date ranged from 1 to 20 with a mean of 4.24 (SD = 3.45) (Table 5). Table 6 shows the frequency of participants' lifetime number of placements within racial categories. Table 7 shows the frequency of participants' lifetime number of placements within age groups.

Table 1

Frequencies of Age

Age	Frequency	Percentage
10	2	1.2%
11	11	7.6%
12	12	16.5%
13	13	18.2%
14	14	15.9%
15	15	21.2%
16	16	8.8%
17	17	10.6%

Table 2

Frequencies of Race

Number of Placements	Frequency	Percentage
White	32	18.8%
Black	69	40.6%
Hispanic	21	12.4%
Multiracial	35	20.6%
Other	13	7.6%

Table 3

Frequencies of Lifetime Placement

Number of Placements	Frequency	Percentage
1	27	15.9%
2	15	8.8%
3	16	9.4%
4	14	8.2%
5	12	7.1%
6	5	2.9%
7	13	7.6%
8	3	1.8%
9	4	2.4%
10	6	3.5%
11	3	1.8%
12	4	2.4%
13	9	5.3%
14	5	2.9%
16	3	1.8%
17	2	1.2%
18	1	0.6%
19	4	2.4%
20	1	0.6%
21	2	1.2%
22	3	1.8%
23	2	1.2%
24	2	1.2%
26	5	2.9%
27	1	0.6%
29	1	0.6%
30	2	1.2%
34	1	0.6%
36	1	0.6%
37	1	0.6%
40	1	0.6%
63	1	0.6%

Table 4

Frequencies of Number of Placements 6 Months Prior to Assessment

Number of Placements	Frequency	Percentage
1	38	22.4%
2	45	26.5%
3	26	15.3%
4	22	12.9%
5	19	11.2%
6	9	5.3%
7	2	1.2%
8	3	1.8%
10	3	1.8%
11	2	1.2%
13	1	0.6%

Table 5

Frequencies of Number of Placements 1 Year Prior to Assessment

Number of Placements	Frequency	Percentage
1	34	20.0%
2	35	20.6%
3	21	12.4%
4	18	10.6%
5	16	9.4%
6	12	7.1%
7	12	7.1%
8	6	3.5%
9	4	2.4%
10	3	1.8%
11	2	1.2%
12	1	0.6%
13	1	0.6%
14	1	0.6%
16	2	1.2%
18	1	0.6%
20	1	0.6%

Table 6

Lifetime Number of Placements by Race

Lifetime Number of Placements	White		Black		Hispanic		Multiracial		Other	
	Freq.	*% within race*	*Freq.*	*% within race*	*Freq.*	*% within race*	*Freq.*	*% within race*	*Freq.*	*% within race*
1	8	25.0%	9	13%	1	4.8%	7	20.0%	2	15.4%
2	1	3.1%	9	13%	3	14.3%	1	2.9%	1	7.7%
3	3	9.4%	5	7.2%	1	4.8%	4	11.4%	3	23.1%
4	3	9.4%	7	10.1%	1	4.8%	1	2.9%	2	15.4%
5	2	6.3%	4	5.8%	2	9.5%	3	8.6%	1	7.7%
6	1	3.1%	6	8.7%	2	9.5%	1	2.9%	1	7.7%
7	1	3.1%	2	2.9%	1	4.8%	3	8.6%	2	15.4%
8	0	0%	2	2.9%	1	4.8%	0	0%	0	0%
9	0	0%	1	1.4%	0	0%	2	5.7%	0	0%
10	1	3.1%	1	1.4%	2	9.5%	2	5.7%	0	0%
11	2	6.3%	1	1.4%	0	0%	0	0%	0	0%
12	2	6.3%	5	7.2%	1	4.8%	0	0%	0	0%
13	1	3.1%	2	2.9%	2	9.5%	1	2.9%	0	0%
14	2	6.3%	1	1.4%	0	0%	1	2.9%	0	0%
16	0	0%	1	1.4%	0	0%	2	5.7%	0	0%
17	0	0%	1	2.9%	1	4.8%	0	0%	0	0%
18	1	3.1%	0	0%	0	0%	0	0%	0	0%
19	1	3.1%	1	1.4%	1	4.8%	1	2.9%	0	0%

Lifetime Number of Placements	White		Black		Hispanic		Multiracial		Other	
	Freq.	*% within race*	*Freq.*	*% within race*	*Freq.*	*% within race*	*Freq.*	*% within race*	*Freq.*	*% within race*
20	0	0%	1	1.4%	0	0%	0	0%	0	0%
21	0	0%	0	0%	1	4.8%	1	2.9%	0	0%
22	1	3.1%	2	2.9%	0	0%	0	0%	0	0%
23	0	0%	1	1.4%	0	0%	1	2.9%	0	0%
24	0	0%	1	1.4%	0	0%	1	2.9%	0	0%
26	0	0%	2	2.9%	1	4.8%	2	5.7%	0	0%
27	0	0%	2	2.9%	0	0%	1	2.9%	0	0%
29	0	0%	0	0%	0	0%	0	0%	1	7.7%
30	0	0%	0	0%	0	0%	0	0%	0	0%
34	0	0%	1	1.4%	0	0%	0	0%	0	0%
36	1	3.1%	0	0%	0	0%	0	0%	0	0%
37	0	0%	1	1.4%	0	0%	0	0%	0	0%
40	1	3.1%	0	0%	0	0%	0	0%	0	0%
63	0	0%	1	1.4%	0	0%	0	0%	0	0%
Total Participants	32		69		21		35		13	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	8.98	9.70	10.16	11.1	9.14	6.95	9.43	8.57	5.77	7.26

Table 7

Lifetime Number of Placements by Age

Lifetime Number of Placements	Age 10		Age 11		Age 12		Age 13		Age 14		Age 15		Age 16		Age 17	
	Freq.	*%*	*Freq.*	*%*	*Freq.*	*%*	*Freq.*	*%*	*Freq.*	*%*	*Freq.*	*%*	*Freq.*	*%*	*Freq.*	*%*
1	0	0%	3	23.1%	8	28.6%	9	29.0%	1	3.7%	5	13.9%	1	6.7%	0	0%
2	0	0%	2	15.4%	4	14.3%	2	6.5%	1	3.7%	4	11.1%	2	13.3%	0	0%
3	1	50%	0	0%	4	14.3%	3	9.7%	1	3.7%	5	13.9%	1	6.7%	1	5.6%
4	0	0%	1	7.7%	3	10.7%	2	6.5%	3	11.1%	2	5.6%	0	0%	3	16.7%
5	0	0%	1	7.7%	0	0%	1	3.2%	1	3.7%	4	11.1%	1	6.7%	4	22.2%
6	0	0%	0	0%	1	3.6%	0	0%	3	11.1%	0	0%	0	0%	1	5.6%
7	0	0%	1	7.7%	2	7.1%	2	6.5%	2	7.4%	3	8.3%	1	6.7%	2	11.1%
8	0	0%	0	0%	2	7.1%	0	0%	0	0%	0	0%	1	6.7%	0	0%
9	1	50%	0	0%	0	0%	2	6.5%	0	0%	0	0%	1	6.7%	0	0%
10	0	0%	0	0%	1	3.6%	2	6.5%	2	7.4%	0	0%	0	0%	1	5.6%
11	0	0%	0	0%	0	0%	0	0%	1	3.7%	1	2.8%	0	0%	1	5.6%
12	0	0%	0	0%	0	0%	1	3.2%	0	0%	2	5.6%	0	0%	1	5.6%
13	0	0%	1	7.7%	0	0%	1	3.2%	2	7.4%	4	11.1%	0	0%	1	5.6%
14	0	0%	1	7.7%	1	3.6%	1	3.2%	1	3.7%	0	0%	0	0%	0	0%
16	0	0%	0	0%	0	0%	0	0%	2	7.4%	0	0%	1	6.7%	0	0%
17	0	0%	0	0%	0	0%	1	3.2%	1	3.7%	0	0%	0	0%	1	5.6%
18	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
19	0	0%	0	0%	1	3.6%	0	0%	2	7.4%	0	0%	1	6.7%	0	0%

Lifetime Number of Placements	Age 10		Age 11		Age 12		Age 13		Age 14		Age 15		Age 16		Age 17	
	Freq.	*%*	*Freq.*	*%*	*Freq.*	*%*	*Freq.*	*%*	*Freq.*	*%*	*Freq.*	*%*	*Freq.*	*%*	*Freq.*	*%*
20	0	0%	0	0%	0	0%	1	3.2%	0	0%	0	0%	0	0%	0	0%
21	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	2	13.3%	0	0%
22	0	0%	0	0%	1	3.6%	0	0%	0	0%	1	2.8%	0	0%	1	5.6%
23	0	0%	1	7.7%	0	0%	1	3.2%	0	0%	0	0%	0	0%	0	0%
24	0	0%	0	0%	0	0%	0	0%	1	3.7%	1	2.8%	0	0%	0	0%
26	0	0%	1	7.7%	0	0%	0	0%	1	3.7%	1	2.8%	0	0%	0	0%
27	0	0%	0	0%	0	0%	1	3.2%	0	0%	0	0%	0	0%	0	0%
29	0	0%	0	0%	0	0%	0	0^%	0	0%	1	2.8%	0	0%	0	0%
30	0	0%	1	7.7%	0	0%	0	0%	0	0%	0	0%	0	0%	1	5.6%
34	0	0%	0	0%	0	0%	1	3.2%	0	0%	0	0%	0	0%	0	0%
36	0	0%	0	0%	0	0%	0	0%	1	3.7%	0	0%	0	0%	0	0%
37	0	0%	0	0%	0	0%	0	0%	1	3.7%	0	0%	0	0%	0	0%
40	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
63	0	0%	0	0%	0	0%	0	0%	0	0%	1	2.8%	0	0%	0	0%
Total Participants	2		13		28		31		27		36		15		18	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	6	4.24	9.92	10.37	5.04	5.45	7.97	8.57	12.48	9.64	9.50	11.86	13.73	11.52	9.44	7.25

Measures

Demographic/Information Sheet

A demographic/information sheet was used to solicit participant gender, age, race/ethnicity, country of origin, primary language, biological parent marital status, parent education level and employment, family socioeconomic status, and religion.

The Nevada Child and Adolescents Needs and Strengths

The NV-CANS (Freeman, 2018; Lyons et al., 1999) is a comprehensive integrative tool that assesses functioning, strengths, behavioral/emotional needs, adverse childhood experiences, acculturation, caregiver resources and needs, and risk behaviors of adolescents and children. The CANS is widely accepted by public agencies, including child welfare and foster care settings, within the United States. A variation of the assessment is used in all 50 states.

The primary domains on the NV-CANS include potentially traumatic/adverse childhood experiences, behavioral/emotional needs, life functioning, strengths, cultural factors, risk factors & behaviors, and caregiver resources & needs. Additionally, 2 age-specific domains (transition to adulthood and early childhood) and 11 sub-domains (trafficked, substance use, developmental/intellectual, sexual development, school, danger to others, sexual aggression, problematic sexual behavior, runaway, delinquent behavior and victimization/exploitation) provide an in-depth understanding of specific levels of functioning within important life domains.

Each item on the NV-CANS uses a 4-level rating system (0-3) as determined by existing behaviors, symptoms, or resources. Each rating level corresponds to an action level that assists evaluators in providing treatment recommendations. Designs for scoring both needs and strength categories are in Table 8. NV-CANS raters are expected to consider the cultural and

developmental appropriateness of behaviors during assessment. Additionally, NV-CANS raters are expected to use a 30-day window prior to assessment to evaluate the present functioning of youth.

Qualifications for administering the NV-CANS include a bachelor's degree, annual training, and completion of a certification test with a reliability of at least .70 (Freeman, 2018). Interrater reliability across CANS domains ranges from .77-.85 indicating excellent reliability (Anderson et al., 2003; C. C. Brown et al., 2022). The CANS total score demonstrated average concurrent validity with the Child and Adolescent Functional Assessment Survey with a correlation of .63 (C. C. Brown et al., 2022; Dilley et al., 2007; Lyons et al., 2014). Additionally, the CANS demonstrated excellent predictive validity (.70-.85) in predicting the level of care and accurately classified 63% of cases into their actual level of care (Anderson et al., 2003; Lyons, 2009; Lyons et al., 2014). Cronbach alpha for the primary school outcomes (i.e., classroom behavior, school achievement, and school attendance) was calculated for the present study (α=0.65). The Cronbach alpha for the present study is less than previous studies utilizing the CANS. However, the Cronbach alpha lies within the confidence interval indicating adequate reliability 95%CI [.55-.73] (Bonett & Wright, 2015).

Table 8

NV-CANS Rating System

Needs

Rating	Level of Need	Appropriate Action
0	No evidence of need	No action needed
1	Significant history or possible need that is not interfering with functioning	Action/intervention required
2	Need interferes with functioning	Action/intervention required
3	Need is dangerous or disabling	Immediate action/intensive action required

Strengths

Rating	Level of Strength	Appropriate Action
0	Centerpiece strength	Central to planning
1	Strength present	Useful in planning
2	Identified strength	Build or develop strength
3	No strength identified	Strength creation or identification may be indicated

Note: Adapted from Freeman, M. (2018). *Nevada—Child and Adolescent Needs and Strengths NV-CANS 2.0 Ages 0-21 2018 Reference Guide*. 128.

Procedures

The present study's procedures were completed in accordance with the University of Nevada, Las Vegas (UNLV) and Nevada Department of Family Services (DFS) policies regarding research with human participants. The UNLV Office for the Protection of Research Subjects, Institutional Review Board (IRB), Social and Behavioral Sciences committee approved protocol # 710923-7 on February 8, 2019. Annual renewal and approval was granted through the UNLV Office for the Protection of Research Subjects, Institutional Review Board (IRB), Social and Behavioral Sciences. Additionally, UNLV and DFS entered into an approved contract to remain in compliance with state and county laws regarding the treatment of children in protective custody. A licensed clinical psychologist received referrals from DFS-related sites in Las Vegas for maltreated youths for comprehensive psychological assessment. All measures in the present study were included in DFS's standard mental health evaluation. As such, diagnostic findings, clinical impressions, and further assessment/treatment recommendations were provided as a part of a summary report for each participant.

Assessments did not require parental permission given the youths' status in DFS custody. However, participants were provided with information about the study following assessment completion. De-identified participant data were analyzed and replaced with a participant identification number to ensure anonymity. De-identified physical copies of the research data were stored in a locked cabinet in a secure university lab.

Assessment procedures were conducted in a confidential environment without DFS personnel. Participating youths completed the self-report demographic/information sheet. Either a graduate student or licensed mental health provider completed the NV-CANS on behalf of the participant utilizing historical records and clinical interviews. Reason for home removal and

number of lifetime transfers in housing was obtained from the youth's records. A graduate student or licensed psychologist interviewed each participant. A licensed psychologist or graduate student under the supervision of a licensed clinical psychologist conducted the remaining measures of the assessment.

Breaks were provided for youths during the assessment process. Support for youths who expressed emotional distress was provided by a graduate student or licensed psychologist. Questions about the assessment process from the participants were encouraged. Additionally, youths were instructed that they were not required to answer any questions that made them uncomfortable. Youths were instructed that they were not obligated to answer questions and that they would not incur any repercussions if they chose not to respond. Appropriate actions were taken if a youth expressed intent to harm themselves or others. Youths were referred for therapy or therapeutic services following the assessment report as necessary.

Data Analysis

Estimations of separate binomial logistic regression models were utilized to analyze the effects of the number of placements on school outcome variables for different groups. All analyses were performed in R version 4.2.2 (R Core Team, 2023). The logistic regression models with dichotomous school behaviors as the outcome variable were estimated with the *glm* (family=binomial(logit). Standardization and centering were completed using the *scale* command. *P*-values and confidence intervals were reported for each predictor.

Primary Predictors

After preliminary analyses, the data was found to be non-normally distributed and did not meet assumptions for linear regression. As such, data transformations were conducted to allow for binomial logistic regressions. Specifically, the total number of placements was calculated

using three non-orthogonal subscores across three different time points: lifetime, one year prior to assessment, and six months prior to assessment (*M*=9.32, *SD*=9.60; *M*=4.24, *SD*=3.45; *M*=3.21, *SD*=2.24). These frequency subscales were z-standardized because they each captured unequal time periods.

Outcome Variables

Based on the dichotomous scoring procedures for the Nevada - Child and Adolescent Needs and Strengths assessment (NV-CANS; Lyons et al., 2018), the three outcome variables were operationalized to represent youths' experiences of problematic vs. non-problematic school behaviors, including classroom behavior, school achievement, and school attendance. These three variables were captured in the "school" supplemental module of the NV-CANS in which raters were asked to indicate if a student met criteria for four different levels of behavior severity in the last 30 days. Each item was rated on a scale from 0 = "No Current Need," 1= "History or Suspicion of Problem," 2= "Problem is Interfering with Functioning," and 3= "Problems are Dangerous or Disabling." For the current analyses, these ratings were used to create a dichotomous version of each of these three items with a response of 0 or 1, indicating that no need or problem was present, and a response of 2 or 3, indicating that this behavior was a problem and in need of support. As a result of these transformations, separate binomial logistic regressions were conducted to allow for evaluation of the hypotheses.

Covariates

Participant-level covariates for each model were racial minority identity (0=White, 1=Non-White); gender (categorized as 0 = female, 1 = male, 2= Trans/Non-Binary); and COVID-19 assessment timing (0 = Before COVID, 1= After COVID). Additionally, the number of days since the first DFS record for each participant was Z-standardized due to the wide range

(0 to 6623) for this variable (*M*=1739.15, *SD*=1915.16).

Analytic Approach

Multicollinearity was assessed to determine if the frequency of placement subscores could be entered into a single model due to their non-orthogonal nature. The variance inflation factor (VIF) scores were less than 5 for each of the three timepoint frequency subscores in both the linear and logistic regressions. As such, the correlation between the given predictor variables and other predictor variables in the model were not severe enough for multicollinearity to be determined. Likelihood ratio tests were conducted to evaluate model fit for each of the logistic regressions. All likelihood ratio tests indicated that the models were of adequate fit.

Hypothesis 1. For Hypothesis 1, three separate binomial logistic regression analyses were completed, utilizing dichotomous versions of the classroom behavior, school achievement, and school attendance as the outcome variables. The primary predictors for hypothesis 1 were z-standardized versions of the lifetime number of placements, number of placements within 1 year prior to assessment and number of placements 6 months prior to assessment.

Hypothesis 2. For Hypothesis 2, three separate binomial logistic regression analyses were completed, utilizing dichotomous versions of the classroom behavior, school achievement, and school attendance as the outcome variables. The primary predictors for hypothesis 2 were a z-standardized version of the lifetime number of placements, dichotomous race variable, age, timing of assessment (before or after COVID shutdown), and a z-standardized version of the longevity in DFS custody.

Hypothesis 3. For Hypothesis 3, three separate binomial logistic regression analyses were completed, utilizing dichotomous versions of the classroom behavior, school achievement, and school attendance as the outcome variables. The primary predictors for hypothesis 3 were a

z-standardized version of the lifetime number of placements within inpatient psychiatric treatment settings and a z-standardized version of the lifetime number of placements within detention center settings.

Post-hoc Analyses. Post-hoc analyses included 6 separate binomial logistic regression analyses, all utilizing dichotomous versions of the classroom behavior, school achievement, and school attendance as the outcome variables. The primary predictors for three of the post-hoc models were a dichotomous lifetime number of placements variable (20+ vs. <20), dichotomous race variable, age, timing of assessment (before or after COVID shutdown), and a z-standardized version of the longevity in DFS custody. The remaining three post-hoc models utilized these same primary predictors with interaction variables including dichotomous lifetime placements (20+ vs. <20) by age, dichotomous lifetime placements (20+ vs. <20) by timing of assessment (before or after COVID shutdown), and dichotomous lifetime placements (20+ vs. <20) by z-standardized longevity in DFS custody.

CHAPTER 4

FINDINGS OF THE STUDY

Hypothesis 1

Hypothesis 1 was that a significant relationship would be found between impairment across school outcome variables as measured by clinician's scoring on the NV-CANS school module and the number of lifetime transfers in housing. These findings were expected to hold while controlling for the number of placements in the 6 months and 1 year prior to the assessment date. This hypothesis comprised three main elements based on type of school outcome.

Hypothesis 1a was that a significant relationship would be found between clinician's ratings of disruptive classroom behaviors as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH1) and the number of lifetime transfers in housing. Greater impairment with respect to disruptive classroom behaviors was expected to be associated with increased number of lifetime transfers in housing. Hypothesis 1a was supported. As seen in Model 1 in Table 9 (page 57), participants with a greater number of lifetime placements were more likely to experience problematic (e.g., interfering with functioning) classroom behaviors during the 30 days prior to assessment, controlling for the number of placements in the prior year and six months (Table 9). The logistic regression model was statistically significant, $x^2(3) = 15.39$, p=.001. The model explained 8.7% (R^2 Tjur) of the variance in problematic classroom behaviors. Participants with placements equal to 1 z-standardized deviation were twice as likely to experience problematic classroom behaviors as those close to the z-standardized mean (OR=2.10, 95%CI [1.38-3.42]). The number of placements within the prior six months and one year were not associated with increased problematic classroom behaviors.

Additionally, hypothesis 1b was that a significant relationship would be found between clinician's ratings of poor school achievement as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH3) and the number of lifetime transfers in housing. Greater impairment with respect to school achievement was expected to be associated with increased number of lifetime transfers in housing. Hypothesis 1b was not supported. As seen in Model 2 in Table 9, participants with a greater number of lifetime placements were not more likely to experience greater impairment in school achievement during the 30 days prior to assessment, controlling for the number of placements in the prior six months and one year. The binomial logistic regression model was not statistically significant, $x^2(3) = 4.25$, p=0.24.

Lastly, hypothesis 1c was that a significant relationship would be found between clinician's rating of school attendance impairment as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH4) and the number of lifetime transfers in housing. Greater impairment with respect to school attendance was expected to be associated with increased number of lifetime transfers in housing. Hypothesis 1c was not supported. As seen in Model 3 in Table 9, participants with a greater number of lifetime placements were not more likely to experience greater impairment in school attendance during the 30 days prior to assessment, controlling for the number of placements in the prior six months and one year. The logistic regression model was not statistically significant, $x^2(3) = 2.49$, p=.48.

Table 9

The Association of the Number of Placements with the Likelihood of Experiencing Problematic vs Non-Problematic School Outcomes

	Problematic Classroom Behavior (dichotomous)			**Problematic School Achievement** (dichotomous)			**Problematic School Attendance** (dichotomous)		
	Model 1			*Model 2*			*Model 3*		
Predictors	*Odds Ratios*	*CI*	*p*	*Odds Ratios*	*CI*	*p*	*Odds Ratios*	*CI*	*p*
(Intercept)	0.70	0.51 – 0.97	**0.031**	0.86	0.63 – 1.17	0.343	0.44	0.31 – 0.61	**<0.001**
Lifetime number of total placements (Z)	2.10	1.38 – 3.42	**0.001**	1.11	0.79 – 1.60	0.544	0.98	0.65 – 1.41	0.925
Number of total placements within one year prior to assessment (Z)	0.88	0.50 – 1.55	0.652	1.49	0.87 – 2.77	0.172	1.32	0.77 – 2.30	0.307
Number of total placements within the 6 months prior to assessment (Z)	0.87	0.52 – 1.43	0.584	0.76	0.44 – 1.25	0.305	0.66	0.38 – 1.11	0.123
Observations	170			170			170		
R^2 Tjur	0.087			0.024			0.016		

Notes: Z=Z-standardized

Hypothesis 2

Hypothesis 2 was that a significant relationship would be found between clinician's rating of impairment across school outcome variables and the number of lifetime transfers in housing and a youth's demographic variables (i.e., race, gender, age, longevity in DFS, assessed before or after COVID-19 shutdown). Gender was not included in the interaction analyses due to the model fit errors that occurred when a small number of participants in the trans/non-binary gender group were included (n=5). This hypothesis comprised three main elements based on type of school outcome.

Hypothesis 2a was that a significant relationship would be found between clinician's ratings of disruptive classroom behaviors as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH1) and the number of lifetime transfers in housing and a youth's demographic variables (i.e., race, gender, age, longevity in DFS, assessed before or after COVID-19 shutdown). Greater impairment due to disruptive classroom behaviors was expected to be associated with increased age, non-white racial identities, female gender identity, longer DFS involvement, and assessment after the COVID-19 shutdown. Hypothesis 2a was partially supported. As seen in Model 4 in Table 10, participants with a greater number of lifetime placements were more likely to experience problematic (e.g., interfering with functioning) classroom behaviors during the 30 days prior to assessment when controlling for racial identity, age, the number of days since their first DFS record, and the assessment timing of COVID-19 (Figure 3). The logistic regression model was statistically significant, $x^2(5) = 12.78$, $p = .02$. The model explained 9.4% (R^2 Tjur) of the variance in problematic classroom behaviors. Participants with placements equal to 1 z-standardized deviation were 1.65 times as likely to experience

problematic classroom behaviors as those close to the z-standardized mean (OR=1.65, 95%CI [1.12-2.25]).

Hypothesis 2b was that a significant relationship would be found between clinician's ratings of poor school achievement as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH3) and the number of lifetime transfers in housing and a youth's demographic variables (i.e., race, gender, age, longevity in DFS, assessed before or after COVID-19 shutdown). Greater impairment due to school achievement was expected to be associated with increased age, non-white racial identities, female gender identity, longer DFS involvement, and assessment after the COVID-19 shutdown. Hypothesis 2b was not supported. As shown in Table 10, Model 5 (page 61) was not statistically significant $x^2(5) = 5.51$, p=.36. Participants with a greater number of lifetime placements were not more likely to experience greater impairment in school achievement during the 30 days prior to assessment, when controlling for racial identity, age, the number of days since their first DFS record, and the assessment timing of COVID-19.

Lastly, hypothesis 2c was that a significant relationship would be found between clinician's ratings of school attendance impairment as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH4) and the number of lifetime transfers in housing and a youth's demographic variables (i.e., race, gender, age, longevity in DFS, assessed before or after COVID-19 shutdown). Greater impairment within school attendance was expected to be associated with increased age, non-white racial identities, female gender identity, longer DFS involvement, and assessment after the COVID-19 shutdown. Hypothesis 2c was partially supported. As shown in Model 6 in Table 10, older participants were more likely to experience problematic (e.g., interfering with functioning) school attendance during the 30 days prior to

assessment, when controlling for racial identity, the lifetime number of placements, the number of days since their first DFS record, and the assessment timing of COVID-19 (Figure 4). The logistic regression model was statistically significant, $x^2(5) = 16.58$, $p < .005$. The model explained 7.6% (R^2 Tjur) of the variance in problematic school attendance. Participants were 1.29 times as likely to experience problematic school attendance as their age increased (OR=1.29, 95%CI [1.06-1.59]).

Table 10

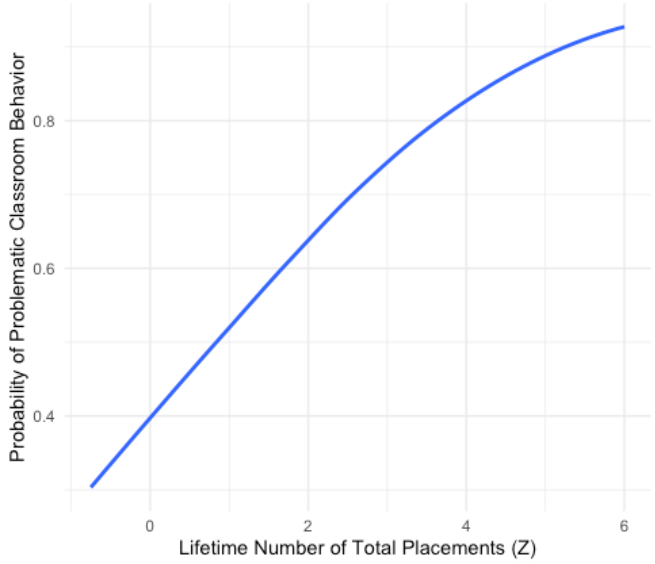
The Association of Demographic Characteristics, the Lifetime Number of Placements, and Timing of Assessment Predictors with the Likelihood of Experiencing Problematic vs Non-Problematic School Outcomes

	Problematic Classroom Behavior (dichotomous)			**Problematic School Achievement** (dichotomous)			**Problematic School Attendance** (dichotomous)		
	Model 4			*Model 5*			*Model 6*		
Predictors	*Odds Ratios*	*CI*	*p*	*Odds Ratios*	*CI*	*p*	*Odds Ratios*	*CI*	*p*
(Intercept)	3.52	0.26 – 50.19	0.346	0.25	0.02 – 3.06	0.281	0.01	0.00 – 0.15	**0.002**
Lifetime number of total placements (Z)	1.65	1.12 – 2.52	**0.015**	1.26	0.88 – 1.83	0.214	0.86	0.56 – 1.26	0.453
Race dichotomous [White vs. Non-White]	0.69	0.29 – 1.59	0.398	1.36	0.62 – 3.02	0.449	1.29	0.53 – 2.99	0.562
Age	0.90	0.74 – 1.08	0.246	1.08	0.90 – 1.29	0.415	1.29	1.06 – 1.59	**0.013**
Assessment timing of COVID [After COVID vs. before COVID]	0.84	0.41 – 1.70	0.635	1.64	0.84 – 3.22	0.151	2.05	0.99 – 4.22	0.052
Days since the first DFS record (Z)	1.23	0.84 – 1.79	0.288	0.98	0.68 – 1.41	0.908	1.18	0.79 – 1.75	0.416
Observations	170			170			170		
R^2 Tjur	0.094			0.032			0.076		

Notes: Z=Z-standardized; DFS=Department of Family Services

Figure 3

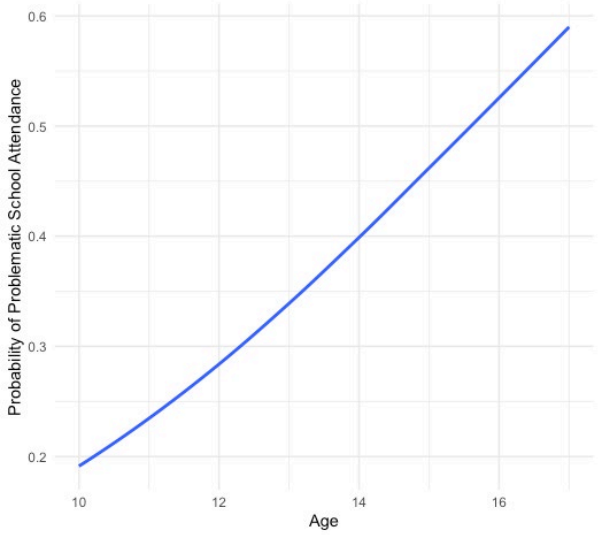
The Association of the Lifetime Number of Placements with the Probability of Experiencing Problematic vs. Non-Problematic Classroom Behaviors, Controlling for Demographics and the Timing of Assessment Predictors



Note: *p<.05, **p<.01.

Figure 4

The Association of Age with the Probability of Experiencing Problematic vs. Non-Problematic School Attendance, Controlling for Race, the Lifetime Number of Placements, and the Timing of Assessment Predictors



Note: *p<.05, **p<.01.

Hypothesis 3

Hypothesis 3 was that a significant relationship would be found between impairment across school outcome variables as measured by clinician's scoring on the NV-CANS school module and the number of lifetime placements within high-risk settings (i.e., inpatient psychiatric treatment facilities, and detention centers). Z-standardization of the number of lifetime placements in inpatient and detention centers (*M*=1.11, *SD*=2.31; *M*=0.51, *SD*=1.51) allowed for analyses although the variables captured unequal time periods. This hypothesis comprised three main elements based on type of school outcome.

Hypothesis 3a was that a significant relationship would be found between clinician's ratings of disruptive classroom behaviors as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH1) and the number of lifetime placements within high-risk settings (i.e., inpatient psychiatric treatment facilities and detention centers). Greater impairment with respect to disruptive classroom behaviors was expected to be associated with increased number of lifetime placements within high-risk settings. Hypothesis 3a was partially supported. As seen in Model 7 in Table 11 (page 65), participants with a greater number of lifetime placements in inpatient mental health treatment centers were more likely to experience problematic (e.g., interfering with functioning) classroom behaviors during the 30 days prior to assessment, when controlling for the number of placements in detention centers. The logistic regression model was statistically significant, $x^2(2) = 12.751$, $p < .001$. The model explained 0.7% (R^2 Tjur) of the variance in problematic classroom behavior. Participants were 1.59 times as likely to experience disruptive classroom behavior as the number of inpatient placements increased (OR=1.59, 95%CI [1.14-2.39]).

Hypothesis 3b was that a significant relationship would be found between clinician's ratings of poor school achievement as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH3) and the number of lifetime placements within high-risk settings (i.e., inpatient psychiatric treatment facilities and detention centers). Greater impairment within school achievement was expected to be associated with increased number of lifetime placements within high-risk settings. Hypothesis 3b was not supported. As seen in Model 8, Table 11, the binomial logistic regression model was not statistically significant, $x^2(2) = 4.16$, p=0.12.

Hypothesis 3c was that a significant relationship would be found between clinician's ratings of school attendance impairment as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH4) and the number of lifetime placements within high-risk settings (i.e., inpatient psychiatric treatment facilities and detention centers). Greater impairment within school attendance was expected to be associated with increased number of lifetime placements within high-risk settings. Hypothesis 3c was not supported. As seen in Model 9, Table 11, the binomial logistic regression model was not statistically significant, $x^2(2) = 0.54$, p=0.76.

Table 11

The Association of the Number of Detention and Inpatient Treatment Center Placements with the Likelihood of Experiencing Problematic vs Non-Problematic School Outcomes

	Problematic Classroom Behavior (dichotomous)			**Problematic School Achievement** (dichotomous)			**Problematic School Attendance** (dichotomous)		
	Model 7			*Model 8*			*Model 9*		
Predictors	*Odds Ratios*	*CI*	*p*	*Odds Ratios*	*CI*	*p*	*Odds Ratios*	*CI*	*p*
(Intercept)	0.70	0.51 – 0.96	**0.028**	0.87	0.64 – 1.17	0.356	0.44	0.31 – 0.61	**<0.001**
Lifetime Number of Detention Placements (Z)	1.31	0.92 – 2.09	0.192	1.23	0.90 – 1.88	0.261	0.88	0.56 – 1.21	0.504
Lifetime Number of Inpatient Treatment Center Placements (Z)	1.59	1.14 – 2.39	**0.012**	1.21	0.90 – 1.68	0.221	1.05	0.76 – 1.42	0.734
Observations	170			170			170		
R^2 Tjur	0.070			0.023			0.003		

Notes: Z=Z-standardized

Post hoc Analyses

After examining the results of the present study, a dichotomous version of lifetime number of placements was created to explore differences between those with a higher (20+) compared to lower (<20) number of placements. Binomial logistic regressions were used to explore how the interaction of demographic variables, timing of assessment before or after COVID-19 shutdown, and dichotomous lifetime placement frequency was associated with the likelihood of experiencing problematic vs. non-problematic school behaviors.

Moderation models examined the interactions between demographic or timing assessment characteristics and the lifetime number of placements in association with potentially problematic school behaviors. After completion of the models examining the unconditional main effects, identical models that included the two- and/or three-way interactions were estimated. When probing the effects of significant interactions, youth characteristics were considered the focal predictors and number of placements was considered the moderator. Models with significant interactions were probed at the frequencies of the placements. To assess conditional effects, simple slopes were compared to zero.

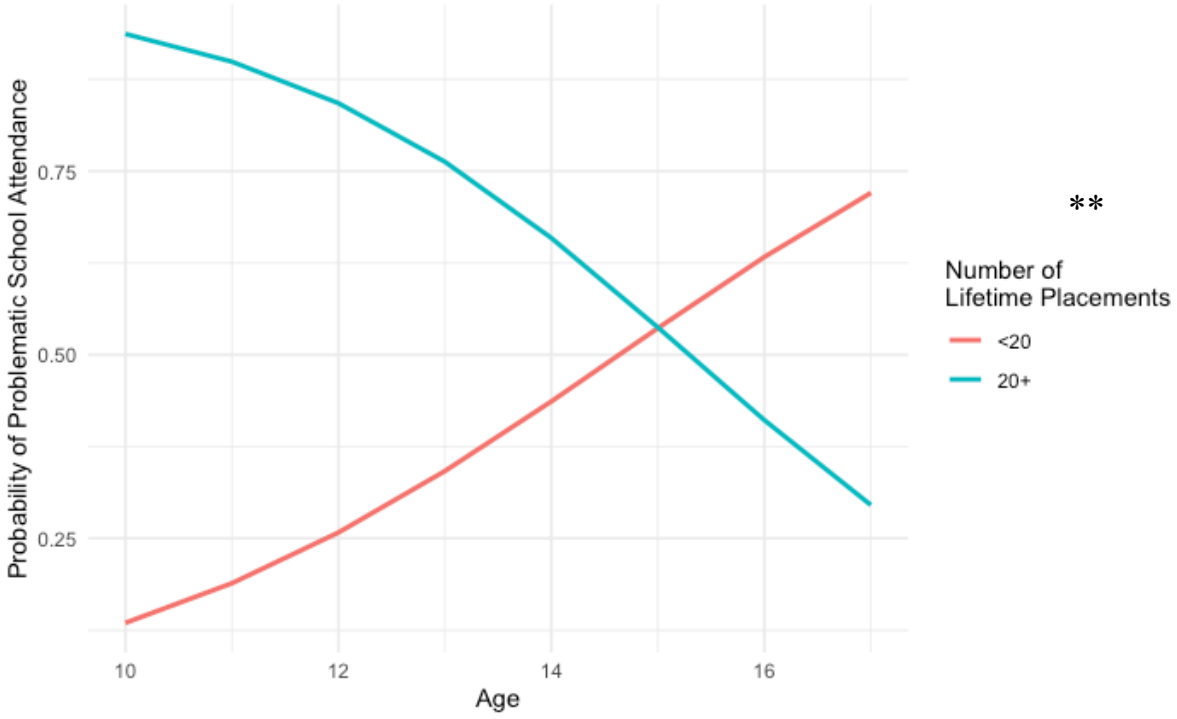
Two-way interactions were explored but racial identity was not able to be included in the interaction analyses due to the model fit errors that occurred when a small number of participants identified as white and experienced 20+ placements (n=3). The likelihood ratio test for Models 12 and 13 (predicting problematic school achievement) indicated that both models were not a better fit to explain the variance of school achievement than null models (p>0.05).

Post hoc analyses explored the unconditional independent main effects of experiencing 20+ lifetime placements on problematic vs. non-problematic school behaviors. As seen in Model 10 in Table 12, participants with 20+ placements had a higher likelihood of experiencing

problematic classroom behaviors. The two-way interaction between age and the frequency of lifetime placements (equal to or greater than 20) significantly predicted the probability of meeting criteria for problematic school attendance when holding all else constant (as seen in Table 12, Model 15). To understand the conditional effects of the interaction, the simple slopes of age on the probability of problematic school attendance were estimated for 20+ lifetime placements vs. <20 placements. Older participants with <20 placements (*B*=0.40, *SE*=0.12, *p*<0.001) experienced a higher likelihood of having problematic school attendance (Figure 5).

Figure 5

Conditional Interaction Effects for Age and Number of Placements on Problematic School Attendance



Note: The association between age and the probability of experiencing problematic vs non-problematic school attendance is moderated by the category of lifetime placement frequency.*p<.05, **p<.

Table 12

The Interaction Between Demographic and Assessment Timing Characteristics and the Category of Placement Frequency in Association with the Likelihood of Experiencing Problematic vs Non-Problematic School Outcomes

	Problematic Classroom Behavior (dichotomous)				**Problematic School Achievement** (dichotomous)				**Problematic School Attendance** (dichotomous)			
	Model 10		*Model 11*		*Model 12*		*Model 13*		*Model 14*		*Model 15*	
Predictors	*Odds Ratios*	*p*	*Odds Ratios*	*p*	*Odds Ratios*	*p*	*Odds Ratios*	*p*	*Odds Ratios*	*p*	*Odds Ratios*	*p*
(Intercept)	2.87	0.431	1.78	0.685	0.23	0.256	0.10	0.099	0.01	**0.001**	0.00	**<0.001**
Lifetime number of placements dichotomous [20+ vs. <20]	3.69	**0.015**	125.70	0.297	1.68	0.294	1201.64	0.083	1.04	0.947	251201.04	**0.006**
Race dichotomous [White vs. Non-White]	0.76	0.519	0.76	0.515	1.40	0.398	1.46	0.351	1.26	0.593	1.35	0.499
Age	0.90	0.267	0.93	0.489	1.08	0.402	1.15	0.168	1.30	**0.012**	1.49	**0.001**
Assessment timing of COVID [After COVID vs. before COVID]	0.83	0.594	0.77	0.496	1.61	0.162	1.61	0.191	2.11	**0.042**	1.76	0.165
Days since the first DFS record (Z)	1.35	0.086	1.25	0.216	1.04	0.831	1.04	0.834	1.08	0.682	1.05	0.785
Lifetime placements [20+ vs. <20] × Age			0.73	0.334			0.64	0.114			0.40	**0.007**
Lifetime placements [20+ vs. <20] ×COVID timing [After COVID vs. before COVID]			1.25	0.873			0.79	0.832			3.33	0.318
Lifetime placements [20+ vs. <20] × Days since the first DFS record (Z)			2.81	0.185			0.91	0.881			1.12	0.880
Observations	170		170		170		170		170		170	
R^2 Tjur	0.094		0.103		0.030		0.046		0.072		0.140	

Notes: Z=Z-standardized; DFS=Department of Family Services

CHAPTER 5

DISCUSSION, IMPLICATIONS, AND FUTURE DIRECTIONS

The primary aim of the present study was to examine the relationship between the number of transfers in housing and the impact on school outcome variables relating to SAPs (i.e., classroom behavior, academic achievement, school attendance). Extant literature and theoretical conceptualization of the impacts of transfers in housing of maltreated youth on school outcomes supported the three hypotheses for the present study (Armfield et al., 2020; Bronfenbrenner, 1977; Leiter, 2007; O'Higgins et al., 2017; Richardson et al., 2018; Runyan & Gould, 1985). The study had three primary hypotheses: (1) a significant relationship would be found between impairment across school outcome variables as measured by clinician's scoring on the NV-CANS school module and the number of lifetime transfers in housing; (2) a significant relationship would be found between the relationship between clinician's ratings of disruptive classroom behaviors as measured by the NV-CANS school module (Appendix 1: Module 5, Item SCH1) and the number of lifetime transfers in housing and youth's demographic variables (i.e., race, gender, age, longevity in DFS, assessed before or after COVID-19 shutdown); (3) a significant relationship would be found between impairment across school outcome variables as measured by clinician's scoring on the NV-CANS school module and the number of lifetime placements within high-risk settings (i.e., inpatient psychiatric treatment facilities, and detention centers).

Few studies have researched the impact of overall number of placements on the school functioning of maltreated youth. The present study addressed shortcomings in current literature and examined how multiple transfers in housing impact school functioning (i.e., classroom

behaviors, school achievement, school attendance) for maltreated youth. Binomial regression models for each hypothesis were generated. Each model examined the relationship between placements and school outcome variables. Study aims and binomial regression models are discussed next in turn.

Hypothesis 1

Hypothesis 1 was that a significant relationship would be found between impairment across school outcome variables as measured by clinician's scoring on the NV-CANS school module and the number of lifetime transfers in housing. This hypothesis comprised three main elements based on the type of school outcome (i.e., disruptive classroom behaviors, school achievement, school attendance). Hypothesis 1a was supported in that anticipated greater impairment with respect to disruptive classroom behaviors was associated with an increased number of lifetime transfers in housing. Hypothesis 1b was not supported in that greater impairment with respect to school achievement was not associated with increased number of lifetime transfers in housing. Hypothesis 1c was not supported in that greater impairment with respect to school attendance was not associated with increased number of lifetime transfers in housing. Findings for hypothesis 1 of the present study in the context of extant literature.

Disruptive Classroom Behaviors

The present study found that youth were 2.1 times as likely to experience problematic classroom behaviors for every 9.60 placements after initial 9 placements. These findings are consistent with prior research indicating that increased transfers in housing, although sometimes necessary, contribute to behavioral, socio-emotional, and academic challenges for CPS involved youth. Disruptive classroom behaviors refer to visible behaviors that interrupt the teacher's instruction or the learning of other students (Collins et al., 2016; McCart & Sheidow, 2016).

Examples of such behavior include but are not limited to aggression, attention difficulties, antisocial behavior, noncompliance with directions, walking around the classroom, shouting, and/or speaking out of turn (Caldarella et al., 2021; Goldberg et al., 2021). While past traumatic experiences from maltreatment explain a portion of these behaviors, initial home displacement, subsequent home removals, and resulting school removals certainly place these youth at increased risk of disruptive classroom behaviors (M. J. Sullivan et al., 2010). Placement instability is associated with increased risk of developing both internalizing and externalizing mental health concerns (Maguire et al., 2024). Behavioral and/or socio-emotional challenges frequently present as disruptive classroom behaviors (Palmieri & La Salle, 2017). Externalizing mental health concerns are more likely to be noticed by teachers in classrooms due to the severity of disruptive classroom behaviors (Splett et al., 2019). Past studies have shown that as many as 80% of CPS involved youth experience borderline to clinical ranges of behavioral problems within school settings (M. J. Sullivan et al., 2010).

School Achievement

The present study did not find a relationship between the number of lifetime transfers in housing and impairment in school achievement. Extant literature in this area is conflicted. While some research indicates no association or even improvements in academic achievement for CPS-involved youth, these studies cite confounding variables that may contribute to the lack of association (Aldgate et al., 1992; Berger et al., 2009; Burley & Halpern, 2001; Pears et al., 2012; Sawyer & Dubowitz, 1994). Additionally, many of these studies occurred twenty to thirty years ago. Notably, continuous systematic changes to education and child welfare policy within the last decade may alter these findings. Furthermore, psychometric assessments and analytical methods have increased in efficiency since then.

Research within the past decade contradicts historical findings. Resent research indicated that CPS involved youth are more likely to perform below grade level than their non-CPS involved peers (Clemens et al., 2018). A single home displacement was associated with a 2.52% reduction in academic growth, with further reductions for each subsequent home displacement (Clemens et al., 2018). CPS-involved youth are further behind academically when they exit the foster care system than when they enter (Clemens et al., 2018; Courtney & Dworsky, 2006; Pecora, 2012). Furthermore, youth with increased home placements experience academic delays above and beyond the effects of maltreatment and neglect (Petrenko et al., 2012). While the present study has notable limitations, further research evaluating the impact of home displacement on academic achievement for CPS-involved youth is needed.

School Attendance

The present study did not find a relationship between the number of lifetime transfers in housing and impairment in school attendance. Present study findings conflict with extant literature. Previous research has shown that a singular change of placement within the past 12 months is associated with decreased attendance (Conger & Rebeck, 2001; O'Higgins et al., 2017). Furthermore, Zorc et al. (2013) found that CPS-involved youth with unstable placements were 37% more likely to be absent than youth who experienced early stability. Placement instability is associated with transfers in school for CPS-involved youth. School instability has also been a documented risk factor for increased absences for CPS-involved youth (Leonard & Gudiño, 2016). The present study was completed with a sample of CPS-involved youth in the state of Nevada. Nevada passed the Every Student Succeeds Act, which increases the likelihood of school stability for CPS-involved youth by affording them certain educational rights, including staying at their school of origin (Every Student Succeeds Act, 2015). School instability

was not directly measured in the present study; however, it could potentially partially explain the lack of significant association between the number of placements and impairment in school attendance. Further evaluation of the impact of placement instability, school instability, and school attendance is needed.

Hypothesis 2

Hypothesis 2 was that a significant relationship would be found between clinician's ratings of impairment across school outcome variables and the number of lifetime transfers in housing and by a youth's demographic variables (i.e., race, gender, age, longevity in DFS, assessed before or after COVID-19 shutdown). This hypothesis comprised three main elements based on type of school outcome (i.e., disruptive classroom behaviors, school achievement, school attendance). Hypothesis 2a was partially supported in that greater impairment due to disruptive classroom behaviors was explained by the number of lifetime housing transfers but not by youth's demographic variables. Hypothesis 2b was not supported in that greater impairment due to school achievement was not explained by the number of lifetime transfers in housing or a youth's demographic variables. Hypothesis 2c was partially supported in that greater impairment within school attendance was associated with increased age but not with any other demographic variables or lifetime transfers in housing. Findings for hypothesis 2 of the present study in the context of extant literature.

Disruptive Classroom Behaviors

Similar to results from hypothesis 1a within the present study and extant literature, greater impairment with respect to disruptive classroom behaviors was associated with an increased number of lifetime transfers in housing (M. J. Sullivan et al., 2010). However, inconsistent with existing literature, the present study did not demonstrate a relationship between

disruptive classroom behavior and race, longevity in DFS, age or impact of timing of COVID-19 shutdown.

Youth from minoritized backgrounds are more likely to be negatively evaluated by teachers and administrators and given harsher punishments for disruptive classroom behaviors by comparison to their white peers (Wymer et al., 2022). These systemic racial biases were expected to be present within the current study due to evaluation of disruptive classroom behaviors heavily relying on punitive punishment provided by schools (Freeman, 2018). Perhaps the findings from the present study reflect an improved awareness regarding discrepant discriminatory punishment for minoritized youth within the school system; however, the results likely are better explained by lack of specificity due to utilization of a dichotomous race variable due to insufficient sample size.

The present study did not yield an association between longevity within DFS custody, age, and disruptive classroom behaviors. Although past research is limited, the present study's findings are inconsistent with existing findings. Youth who first interact with DFS at younger ages are more likely to experience behavioral difficulties that can be present at school (O'Malley et al., 2015). Similarly, older youth have an increased potential for being involved with CPS. This increased opportunity for CPS involvement, in turn, increases risk of maladaptive behaviors within the classroom (O'Malley et al., 2015). The longevity from the time of first interaction with DFS may lead to higher lifetime placements and decreased stability throughout the lifetime. Further research is needed to evaluate the relationship between length of time in DFS custody and its overall impacts on disruptive classroom behaviors.

No association between disruptive classroom behaviors and assessment occurring pre-COVID-19 pandemic and post-COVID-19 pandemic was found in the present study. These

findings were inconsistent with findings in research on the impact of the COVID-19 pandemic on student behavior. The COVID-19 pandemic affected global functioning for all students. Significant decreases in concentration, attention, engagement and task persistence were found amongst students after the start of the pandemic (Raghunathan et al., 2022). Additionally, increases in impulsivity were noted amongst students after the start of the pandemic (Raghunathan et al., 2022). The impact of these findings led to increased classroom disruptions for all students. CPS-involved youth would likely also experience these same impacts. However, due to general increased risk for disruptive behaviors, further increases may not have been adequately measured by the NV-CANS.

School Achievement

Similar to results from hypothesis 1b within the present study, there was no association between school achievement and the lifetime number of placements. These findings are inconsistent with extant literature in that historical research indicates placement history negatively impacting school achievement (Clemens et al., 2018; Courtney & Dworsky, 2006; Pecora, 2012; Petrenko et al., 2012). Additionally, the present study did not demonstrate a relationship between school achievement and race, longevity in DFS, age or impact of timing of COVID-19 shutdown. These findings are also inconsistent with extant literature. The relationship between these variables and school achievement within the context of extant literature is explored next.

An abundance of literature highlighting the relationship between race and school achievement has found that youth from minoritized backgrounds have lower school achievement than their white peers (Assari et al., 2021; Paschall et al., 2018). Lower academic achievement for minoritized groups can be explained as a result of systemic oppression, less access to

resources, and racial biases in standardized testing (Assari et al., 2021; Paschall et al., 2018; White et al., 2016). These systemic racial biases were expected to be present within the current study. Due to a lack of significant findings, the results likely are better explained by lack of specificity due to utilization of a dichotomous race variable due to insufficient sample size.

Longevity in DFS was not associated with school achievement, despite past research indicating poorer academic achievement for youth with first CPS involvement at older ages. For youth within foster care settings, reduction in academic growth increases for each year they are older at time of first removal (Clemens et al., 2018). Additionally, Sebba et al. (2015) found that instability around exam time and placement changes after age 11 were associated with lower exam scores at age 16. Further research is needed to understand the way that longevity in CPS services impacts school achievement.

Literature exploring the impact of age on school achievement is sparse. As youth age, their knowledge is expected to continuously grow. Limited research shows that there is a positive linear relationship between age and academic achievement for elementary school aged youth (Grissom, 2004). However, this relationship disappears by the time that students reach 10th grade (Grissom, 2004). The findings from the present study are consistent with this study in that there was no association between age and school achievement for older youth.

Extant literature on the impact of the COVID-19 pandemic on school achievement is mixed. Several studies indicate a negative impact on academic achievement across subjects as a result of the COVID-19 pandemic (Clark et al., 2021; Depping, Denise et al., 2021; Engzell et al., 2020; Hammerstein et al., 2021; Kuhfeld et al., 2020; Maldonado & De Witte, 2022; Schult et al., 2021; Tomasik et al., 2021). However, some research indicates a positive impact of the COVID-19 pandemic on academic achievement (Hammerstein et al., 2021; Meeter, 2021;

Spitzer & Musslick, 2021; Van Der Velde et al., 2021). Notably, these studies highlight the importance of online-learning software. Due to limited access to resources within the state of Nevada for the youth in the present study, it is unlikely that the COVID-19 pandemic would have had a positive impact on their academic achievement. Surprisingly, the present study did not identify a reduction in academic achievement post-COVID-19 pandemic. CPS-involved youth would likely also experience these same impacts. However, due to general increased risk for school achievement, further increases may not have been adequately measured by the NV-CANS. Further research to understand the way that the COVID-19 pandemic impacted CPS-involved youth's academic achievement is warranted.

School Attendance

Consistent with findings from hypothesis 1c, the present study did not demonstrate a relationship between the number of transfers in placements and school attendance even when accounting for demographic variables. These findings are in conflict with literature (Conger & Rebeck, 2001; O'Higgins et al., 2017; Zorc et al., 2013). Additionally, the present study did not demonstrate a relationship between school attendance and race, longevity in DFS, or timing of assessment with respect to the COVID-19 shutdown. These findings are also in conflict with previous literature.

Extant literature routinely finds a significant relationship between race and risk for school absenteeism (Gee, 2018). Specifically, youth from minoritized backgrounds are at increased risk for chronic absenteeism (Gee, 2018; Skedgell & Kearney, 2018; U.S. Department of Education, 2019). This increased risk results from many factors rooted within systemic disparities across access to health care, social welfare, education and wealth (Gee, 2018). The lack of significant relationship between race and problematic school attendance should be interpreted with caution.

Longevity of CPS involvement is a risk factor for school attendance problems within extant literature. A singular report of child maltreatment has a rapid negative effect on school attendance for CPS involved youth (Leiter, 2007). Additional increased risk for school attendance problems increases when a youth is placed in CPS custody (Duke, 2020; Hagborg et al., 2018; Leiter, 2007; Leiter & Johnsen, 1997; Stempel et al., 2017). Furthermore, Leiter (2007) found that as the age for first CPS report of maltreatment decreases, the impact on absenteeism increases (Leiter, 2007). The present study did not support these historical findings.

School absenteeism increased during the COVID-19 shutdown as schools were trying to transfer to remote instruction (Santibañez & Guarino, 2021). Furthermore, school absenteeism grew by 91% in the years following the re-opening of schools, equating to an additional 6.5 million students meeting clinically significant levels of school absenteeism (Nathwani et al., 2021). It is unlikely that school attendance for youth in the sample was not also impacted. However, due to the subjective nature of the NV-CANS without distinct days, amount of time, or direct impacts, DFS clinicians may have unintentionally accounted for the impact of the COVID-19 pandemic when scoring individual youth.

However, the present study found that older youth were 1.29 times as likely to experience problematic school attendance for every year they age. These findings are consistent with prior research that rates of problematic school attendance increase between 6th and 12th grade (Allen et al., 2018). Past researchers have found older age to be a reliable predictor of school absenteeism and problematic school attendance (Gubbels et al., 2019; Skedgell & Kearney, 2018). Findings from the present study would suggest that age continues to be a reliable predictor for identifying school attendance problems.

Hypothesis 3

Hypothesis 3 was that a significant relationship would be found between impairment across school outcome variables as measured by clinician's scoring on the NV-CANS school module and the number of lifetime placements within high-risk settings (i.e., inpatient psychiatric treatment facilities and detention centers). This hypothesis comprised three main elements based on type of school outcome. Hypothesis 3a was partially supported in that greater impairment due to disruptive classroom behaviors was associated with increased number of lifetime placements within psychiatric inpatient settings while controlling for lifetime placements within detention centers. Hypothesis 3b was not supported in that greater impairment within school achievement was not associated with an increased number of lifetime placements within high-risk settings. Hypothesis 3c was not supported in that greater impairment within school attendance was not associated with an increased number of lifetime placements within high-risk settings. Findings for hypothesis 3 of the present study in the context of extant literature.

Disruptive Classroom Behaviors

Placement within detention centers was not significantly associated with increased disruptive classroom behaviors in the present study. These findings are inconsistent with extant literature. Disruptive classroom behaviors refer to visible behaviors that interrupt the teacher's instruction or the learning of other students, including aggression, attention difficulties, antisocial behavior, noncompliance with directions, walking around the classroom, shouting, and/or speaking out of turn (Caldarella et al., 2021; Collins et al., 2016; Goldberg et al., 2021; McCart & Sheidow, 2016). School systems within the United States frequently fail to provide necessary support for youth reentering the school systems following incarceration, which in turn leads to continued behavioral difficulties and higher rates of recidivism (Kubek et al., 2020). Forty-one

youth in the present study had ever been placed within a detention center setting. Although the sample size was sufficient for analyses, the limited sample size may have impacted findings.

The present study found that youth were 1.59 times as likely to experience problematic classroom behaviors for every 2.31 placements within inpatient psychiatric care settings after an initial inpatient psychiatric placement. Due to severity of symptoms and lack of active mental health support, CPS involved youth are more likely to utilize inpatient psychiatric care as opposed to preventative care services (Szilagyi et al., 2015). Inpatient psychiatric stays impact youth's social and educational experiences. Furthermore, many youth experience difficulties adjusting to post-discharge environments including attending to academic, systemic and socio-emotional demands (Savina et al., 2014). Discharge from psychiatric inpatient settings requires a generalization of therapeutic skills gained during treatment, which can take time and dedicated effort from caregivers, teachers, and the youth themselves. Past research demonstrates that youth discharged from inpatient psychiatric settings are at increased risk for re-hospitalization when lacking support in reintegrating into life outside these settings (Savina et al., 2014). Youth within the foster care system may be at increased risk of re-hospitalization for the same behaviors due to changes in support depending on frequent placement alterations (Aarons et al., 2010).

School Achievement

Placements within detention centers and inpatient psychiatric treatment centers were not significantly associated with poor school achievement in the present study. These findings are inconsistent with extant literature. Formerly incarcerated youth who do not receive education while incarcerated have increased difficulty in school achievement post incarceration (Lambie & Randell, 2013). The quality of correctional education varies by jurisdiction, site, delivery, and oversight (Pace, 2017). These variations significantly impact the variation school achievement of

previously incarcerated youth. Additionally, past studies have highlighted the reduction in school achievement with subsequent incarcerations for youth (Pyle et al., 2016). Due to the discrepancy between past literature and the present study, the impact of placement within detention centers on school achievement for foster youth warrants additional study.

Existent literature has identified increased risk for poor academic achievement for youth who have received inpatient psychiatric care. Youth who have received psychiatric inpatient care typically have less overall educational attainment than their peers (Holttinen et al., 2023; Ogilvie et al., 2019). The present study did not establish a relationship between placement within an inpatient psychiatric treatment center and school achievement. This discrepancy in findings warrants additional research.

School Attendance

Placements within detention centers and inpatient psychiatric treatment centers were not significantly associated with school attendance problems in the present study. These findings are inconsistent with extant literature. Past literature has indicated that youth returning to communities from detention centers without necessary literacy, vocational, and social skills increases the risk of recidivism leading to decreased access to education (Lambie & Randell, 2013). Disruption of education from incarceration leads to continued reduced school attendance upon release (Lambie & Randell, 2013). Additionally, leaving a highly structured environment such as a detention center to a traditional school setting proves difficult for many youth and increases the likelihood of absenteeism (Sheldon-Sherman, 2010). The discrepancy in findings between the present study and past literature warrants further exploration.

Youth with significant mental health concerns are at increased risk for school absenteeism (Holttinen et al., 2023). Requiring inpatient treatment can be seen as an indicator of

the severity of mental health concerns (Holttinen et al., 2023). Additionally, admittance and discharge from inpatient psychiatric may result in decreased attendance in school (Preyde et al., 2018). The present study did not establish a relationship between placement within an inpatient psychiatric treatment center and school attendance. Findings from the present study may be inconsistent with extant literature due to scoring criteria for NV-CANS requiring the scorer to utilize the past 30 days to indicate risk.

Post hoc Analyses

Post hoc analyses were completed to explore differences in school outcome variables between those with higher (20+) and those with lower (<20) number of placements. Models were examined for each main school outcome (i.e., disruptive classroom behaviors, school achievement, school attendance).

Disruptive Classroom Behaviors

Consistent with findings in hypothesis 1a, participants with 20+ placements had a higher likelihood of experiencing problematic classroom behaviors. Additionally, consistent with findings in hypothesis 2a, no other variables were associated with problematic classroom behaviors including dichotomous race variable, age, longevity in DFS, and timing of assessment with respect to the COVID-19 shutdown. Furthermore, no two-way interaction variables were associated with increased disruptive classroom behaviors. These post-hoc analyses were consistent with previously completed analyses and produced no unique findings.

School Achievement

Consistent with findings in hypotheses 1b and 2b, the dichotomous placement variable, dichotomous race variable, age, longevity in DFS, and timing of assessment with respect to the COVID-10 shutdown were not associated with school achievement. Furthermore, no two-way

interaction variables were associated with decreased school achievement. These post-hoc analyses were consistent with previously completed analyses and produced no unique findings.

School Attendance

Post-hoc analyses provided additional understanding of variables associated with problematic school attendance. Consistent with hypothesis 2c, age was a significant predictor of problematic school attendance. Timing of assessment with respect to the COVID-19 pandemic emerged as an additional predictor of problematic school attendance. Youth evaluated after the COVID-19 shutdown were more likely to experience problematic school attendance. The dichotomous race variable and longevity in DFS were not associated with school attendance.

However, a conditional effect was found when examining the two-way interaction between age and the frequency of lifetime placements (equal to or greater than 20). Older participants with <20 placements experienced a higher likelihood of having problematic school attendance than those with 20+ placements. These findings conflict with the present study's hypotheses and extant literature. Past research has indicated that youth with increased placement instability and older youth are more likely to experience increased problematic school attendance (Kearney & Graczyk, 2020b; S. Stone, 2007). It is possible that older youth with 20+ placements have adapted to the instability of placements and no longer experience as severe of a functional impact. Furthermore, youth with 20+ placements may have increased placement within highly structured settings, reducing risk of decreased school attendance. Additionally, due to their high transparency within the CPS system, these youth may experience higher levels of support through case workers providing the support needed to reduce academic functional impairment. Another possible explanation may be that youth with 20+ placements may internally seek support from peers, teachers, or administrators at school as there may be more stability in that

area of their life, leading to an increase in school attendance. Further research is needed to evaluate the full implications and reasons for these findings.

Clinical Implications

The present study highlights the need for interdisciplinary care for CPS involved youth. Findings from the present study identify significant impacts on classroom behaviors from increased number of inpatient treatment center placements. CPS involved youth would likely benefit from increased care coordination between their mental health treatment, foster placements, and academic settings.

Assessment

Clinicians and school psychologists should include careful screening of adaptive functioning and symptoms of trauma and stressor disorders following home displacement (Pullmann et al., 2018). Early assessment and identification of behavioral health concerns can reduce overall impact and severity of concerns (Bunger et al., 2021; Kim et al., 2022). Continued assessment of functioning post-hospitalization could allow providers to identify potential reintegration concerns to allow for increased success in returning to placements and school settings (Szilagyi et al., 2015). In doing so, youth in need of increased support and treatment can be more readily identified, effectively reducing their risk of needing further inpatient psychiatric services. Furthermore, assessments should include adaptive measures of school and social functioning to allow for identification of risk factors that could lead to subsequent hospitalizations (Tossone et al., 2014). Incorporation of teacher and caregiver reports within assessments provides comprehensive understanding of a youth's functioning (Eklund et al., 2022). Through assessment coordination across settings, youth may experience earlier identification of behavioral health concerns.

Treatment

Early intervention is routinely identified as a protective factor in the severity and duration of mental health concerns (Colizzi et al., 2020). Increased access to appropriate outpatient services reduces overreliance on inpatient psychiatric treatment (Szilagyi et al., 2015; United States Department of Justice Civil Rights Division, 2022). Clinicians are encouraged to assess and treat disruptive classroom behaviors for youth as this may provide a way to increase adaptive functioning (Kearney & Graczyk, 2020b). Evidence-based treatments for trauma have demonstrated reductions in behavioral impacts for CPS involved youth. Clinicians are encouraged to utilize treatments such as Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) to reduce the impact of trauma from repeated home placements (Dorsey et al., 2014; Fitzgerald & Cohen, 2012; Hambrick et al., 2016).

Clinicians are further encouraged to aid youth in accessing school based interventions such as an Individualized Education Program (IEP) or 504 Plan to increase accessibility within academic settings. Clinicians may notice increased intervention effectiveness when integrated into school systems (Hoover & Bostic, 2021). Integration of services may also allow for increased consultation between mental health providers, teachers, and administration. Integration of clinicians into school and academic settings may reduce stigma and barriers to care (Hoover & Bostic, 2021).

Policy Implications

The present study's findings have implications for policies focusing on research specific to CPS-involved youth, the incorporation of trauma informed school systems, increased mental health access, and stabilization for home and school placement at the local, state, and federal levels. Policy recommendations for each are discussed next in turn.

Research

CPS-involved and maltreated youth are a protected population making access to research restricted (Mathews et al., 2022). These barriers and restrictions are to ensure to safety and well-being of this vulnerable population (Mathews et al., 2022). However, increased research is necessary for effective, evidence-based policy interventions. State or federally funded research positions embedded within DFS or school systems allowing access to records for comprehensive research on risk/protective factors, and results from policy intervention would provide meaningful data at a relatively low risk for CPS Increased research would assist state DFS to identify the most at risk CPS-involved youth for poor academic and mental health outcomes.

Trauma Informed School Systems

Trauma informed school systems are beneficial for all students, not just CPS involved youth (Sweetman, 2022). The National Child Traumatic Stress Network defines trauma informed school systems as a school system "in which all teachers, school administrators, staff, students, families, and community members recognize and respond to the behavioral, emotional, relational, and academic impact of traumatic stress on those within the school system (The National Child Traumatic Stress Network, 2017)." A trauma-informed school system has ten essential elements (Table 13) (National Child Traumatic Stress Network, Schools Committee, 2017). These elements highlight the importance of preventing, identifying, assessing, addressing, and treating traumatic stress within the school system. Trauma-informed school systems can be implemented by using a multi-tiered systems of support (MTSS) framework (National Child Traumatic Stress Network, Schools Committee, 2017).

Table 13

Essential Elements of Trauma-Informed School Systems

1.	Identifying and assessing traumatic stress
2.	Addressing and treating traumatic stress
3.	Teaching trauma education and awareness
4.	Having partnerships with students and families
5.	Creating a trauma-informed learning environment focusing on social/emotional skills and wellness
6.	Being culturally responsive
7.	Integrating emergency management & crisis response
8.	Understanding and addressing staff self-care and secondary traumatic stress
9.	Evaluating and revising school discipline policies and practices
10.	Collaborating across systems and establishing community partnerships

Note. (National Child Traumatic Stress Network, Schools Committee, 2017).

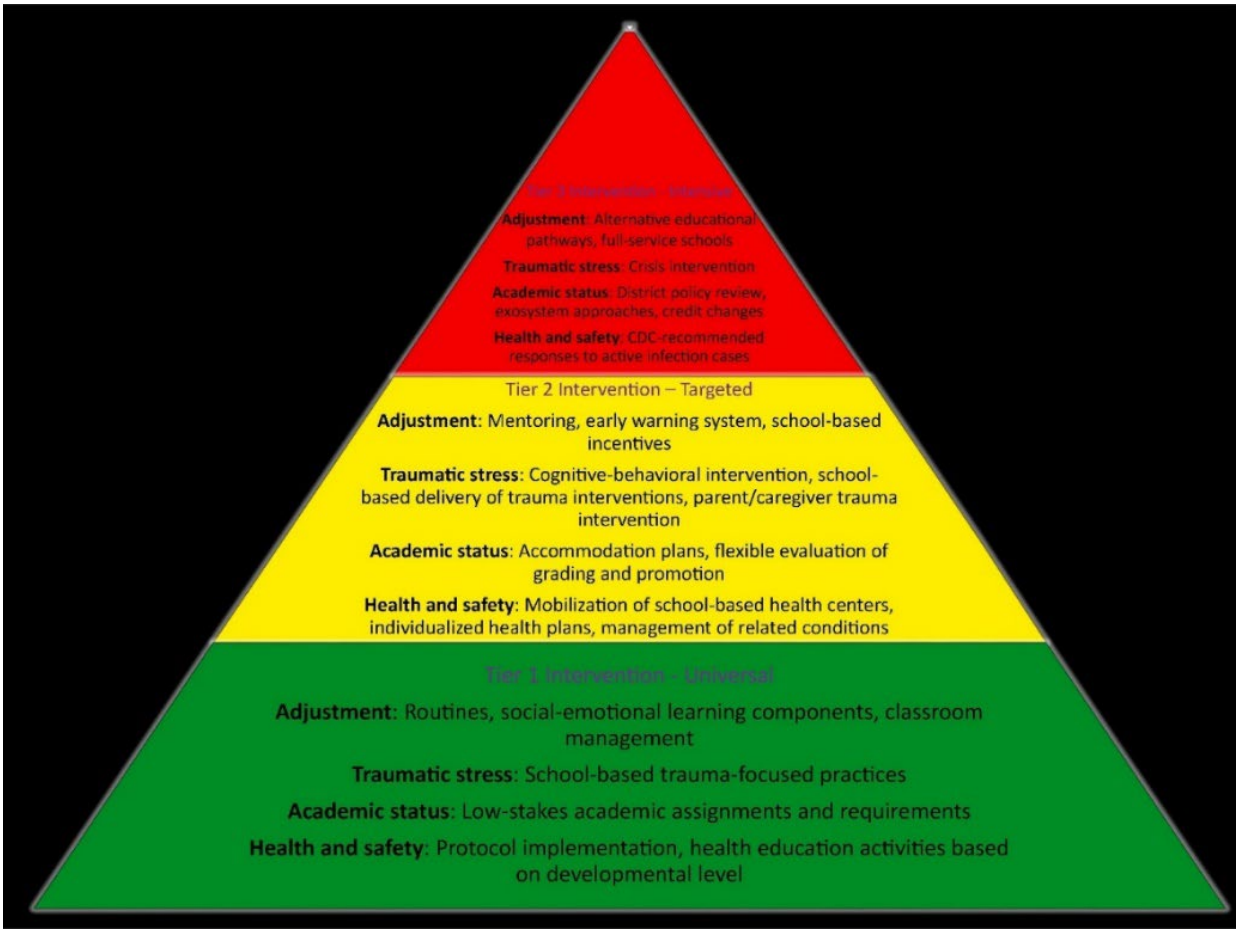
Utilization of MTSS allows for early identification and support for all students displaying learning, emotional, or behavioral needs (Hoover & Bostic, 2021; National Child Traumatic Stress Network, Schools Committee, 2017). Multi-tiered system of support (MTSS) models stratify students across various domains and match assessments and/or interventions based on student needs (Hoover & Bostic, 2021; Kearney & Graczyk, 2020) (Figure 6). Kearney & Graczyk (2020) introduce the use of multidimensional, multi-tiered system of support framework to better emphasize on specific areas of functioning (i.e., academic, social, emotional, behavioral, and physical health). The use of multidimensional MTSS models allows for targeted

assessment or intervention across areas of functioning to increase school attendance (Kearney & Graczyk, 2020).

Both traditional and multidimensional MTSS models stratify students across three tiers (Kearney & Childs, 2021; Kearney & Graczyk, 2020). Tier 1 approaches generally target all students and utilize broad approaches including school, district or system interventions (Kearney & Graczyk, 2020). Tier 2 approaches generally target students with moderate concerns across areas of functioning and utilize focused approaches including child, parent or family based interventions (Kearney et al., 2019; Kearney & Graczyk, 2020). Tier 3 approaches generally target students with severe concerns across areas of functioning and utilize focused, individualized approaches that include both system-wide and individual interventions (Kearney et al., 2019; Kearney & Graczyk, 2020). CPS-involved youth likely need tier 3 level interventions to assist with adjustment, traumatic stress, academic status and health and safety concerns that impact SAPs (Kearney & Graczyk, 2020). Multidimensional MTSS models allow for a targeted understanding of how to implement trauma-informed interventions for maltreated youth across areas of functioning. Furthermore, utilizing a MTSS approach across each essential element for a trauma-informed school system allows for all students access to meaningful prevention, assessment, and intervention of traumatic stress (National Child Traumatic Stress Network, Schools Committee, 2017).

Figure 6

Example of Multi-Tiered Systems of Support for Trauma-Informed School Systems and SAPs



Note. (Kearney & Childs, 2021).

Policies requiring professional development courses to learn about utilizing MTSS to implement trauma-informed school systems for teachers and administrators would allow access points for implementation across levels within school systems (Hoover & Bostic, 2021). These types of training would give teachers and administrators the knowledge and tools necessary to provide further impact on their school youths' lives. Furthermore, these trainings could provide

opportunities for youth in need to gain access to mental health care and provide opportunities for stabilization of school placements for CPS-involved youth.

Stabilization of School Placements

The utilization of trauma-informed school systems could be particularly impactful for schools where students are more likely to experience a CPS report due to impacts for CPS-involved youth within the Every Student Succeeds Act. The Every Student Succeeds Act was a federal act for implementation at the state level and was signed into Nevada law on December 10, 2015 (Every Student Succeeds Act, 2015; U.S. Department of Education, 2024). The Every Student Succeeds Act allows CPS-involved youth the option to remain at their school of origin throughout the remainder of the school year throughout a home placement transition if it is determined to be for their betterment (Every Student Succeeds Act, 2015).

Youth from low SES and historically marginalized backgrounds are at higher risk for CPS involvement due to systemic oppression and discrimination (Butchart et al., 2006; *CDC*, 2022; Coulton et al., 2018; McLeigh et al., 2018; Rodriguez et al., 2021). At the intersection of various systems of oppression, schools with higher levels of CPS-involved students typically are underfunded due to clustering of lower taxes and the distribution of funds within the school system (Boustan et al., 2013). As such, schools with higher levels of CPS-involved students are in need of additional supportive resources. Increased school psychologists and community partnerships would allow for necessary support for CPS-involved students for increased chance to remain at their school of origin. Existent literature demonstrates a significant relationship between stabilization of school placements and classroom behavior, school achievement, and school attendance (Clemens et al., 2018; Conger & Rebeck, 2001; Courtney & Dworsky, 2006; O'Higgins et al., 2017; Pecora, 2012; Petrenko et al., 2012; M. J. Sullivan et al., 2010; Zorc et

al., 2013). Transfers in home placements frequently precipitates a transfer in school placement and should also be considered when trying to provide school stabilization (Clemens et al., 2018; Leonard & Gudiño, 2016; O'Higgins et al., 2017).

Stabilization of Home Placements

The present study emphasizes the importance of home placement stabilization for CPS-involved youth to reduce risk for negative school outcomes. Public policy that allows for increased stabilization for CPS-involved youth would allow for meaningful impacts across their areas of functioning. On April 15, 2024, Kansas enacted a new option for permanency for older youth within the foster care system (Annie E. Casey Foundation, 2024). The Support, Opportunity, Unity and Legal Relationships (SOUL) law allows for legal permanency options for CPS-involved youth ages 16 and older. In doing so, these youth are able to establish permanent legal bonds with trusted adult caregivers while keeping their legal ties to their biological families intact (Annie E. Casey Foundation, 2024). This framework also incorporates these youth into the decision-making process for selecting a trusted adult caregiver, which could increase the likelihood of a successful placement. When youth are allowed to assist in the decision making of their placements, the chances of a better placement fit may increase, leading to increased placement stability.

Mental Health Access

Access to mental health begins with effective recognition and assessment of those who would benefit from services (C. C. Brown et al., 2022). Versions of the CANS are utilized across states within departments of family and child services (C. C. Brown et al., 2022). The CANS has several notable strengths including assessment across a wide range of areas of functioning, ability to be tailored, ease of use, culturally adaptive, and ease of generalization due to use across

most states (Lyons et al., 1999). At present, the CANS is the best measure available to researchers within DFS systems due to the pervasiveness of use. While the CANS has adequate inter-rater reliability, many of the studies highlighting its validity were completed by the creator of the scale (C. C. Brown et al., 2022). Further research and development is needed to fully evaluate the effectiveness of this measure (C. C. Brown et al., 2022). Other psychometric assessments demonstrated superior validity and reliability while measuring similar constructs. Departments of family and child services are encouraged to seek consultation with their respective clinical teams to identify assessment measures that will allow for increased accuracy in identifying at risk youth.

After effective assessment, access to mental health intervention may become necessary. Mental health intervention access includes access to outpatient services, psychological assessment, crisis services, and inpatient psychiatric services. Findings from the present study identified increased risk for disruptive classroom behaviors for CPS-involved youth after two psychiatric inpatient treatment placements. Increasing access to outpatient and community intervention services can effectively reduce a CPS involved youth's risk of classroom behaviors by reducing the number of inpatient stays.

The state of Nevada, where the present study was conducted, has been labeled as being in a mental health professional shortage area (U.S. Department of Health and Human Services, 2024). In order to increase access to mental health, retention and recruitment of mental health professionals is integral. Due to differences in disciplines, only information specific to the retention of psychologists are discussed. Psychologists are more likely to establish their career in their place of origin or where they complete their degree. In order to increase the number of

psychologists within any given state, increased American Psychological Association (APA) accredited internship positions and subsequent postdoctoral opportunities are imperative.

The development of APA accredited internship consortium sites would provide pathways for generalized psychologists to be recruited to a specific state. States with a mental health professional shortage may benefit from consortium training sites to disperse the responsibility, financial obligation, and time commitments across several training sites. After the development of APA accredited internship sites, those graduated psychologists would need places for postdoctoral training prior to licensure. States would likely see quick returns on their investments by developing a state-funded position or program, with an emphasis on seeking APA accreditation status and postdoctoral training for already existing training sites (University of Nebraska Medical Center, 2024).

The development of training opportunities for retention should not be reliant on state funding alone. Legislation with the intention of increasing funding opportunities through access to insurance billing for intern and postdoctoral level trainees. The APA emphasized the need for increased access to mental health care and proposed allowing psychology intern and postdoctoral level trainees to be reimbursed by Medicaid as a feasible way to do so (American Psychological Association, 2015). Expanding access to allow psychology interns and postdoctoral level trainees to be reimbursed for services from all insurances, would further increase access to care. Nevada's Senate Bill 150, although not passed during the 2023 legislative session, would have allowed for reimbursement for psychology interns and postdoctoral level trainees across all insurances (Nevada Legislature, 2024).

Policy Implementation

For each recommended policy, a variety of stakeholders, each with a varying level of influence, knowledge and resources, can help develop the requisite infrastructure to make meaningful changes. Some of these stakeholders include school districts, boards of trustees, state and federal departments of education, teachers' unions, state and federal mental health professional associations, state and federal departments of children and family services and others who provide children's services. When hoping to make change, stakeholders are encouraged to contact those who may share interests and talk about spheres of influence, allocation of resources, and whether or not legislative action is required. Should legislative action be required, building group cohesion across stakeholders towards a unified goal assists in the likelihood that the legislature will enact policy.

Limitations

Findings from the present study should be considered with caution due to various limitations. First, results relied on a combination of self-report and record reviews. Many youths reported a heightened emotional state due to being placed in emergent care. This heightened emotional state may have impacted their ability to accurately self-report. Additionally, information gathered by records review was limited to records within Nevada. Youth may have had past placements within DFS across states that were inaccessible during the present study. Therefore, the present study's findings may have been impacted by inaccurate self-reports provided by youth or incomplete records.

Second, the internal reliability of the present study, although adequate, may impact the study's findings. The present study utilized multiple raters and versions of the NV-CANS. The calculated internal reliability may reflect these variances. Moreover, placement of youth at the

time of assessment may have impacted school outcome scores within the NV-CANS. Youth were in varying settings at time of assessment, including emergency group homes, inpatient psychiatric settings, foster care, kinship care, and juvenile justice settings. The ways in which school outcomes are measured may vary by setting, leading to decreased internal reliability. These limitations may have contributed to the lack of significance across models.

Third, the present study's generalizability is likely impacted due to sample size. Additionally, increased sample size may provide more robust measures of internal reliability. The present study utilizes a sample size of 170 CPS involved youth. Although the present study's sample size was large enough to complete regression analyses, reliability, and generalizability may be improved upon by increasing sample size. Additional participants could not be evaluated as a part of the present study due to limitations within the IRB and incomplete measures leading to exclusion from the present study. However, due to paucity of extant literature involving CPS involved youth, researchers continued with analyses due to adequacy of internal reliability and sample size.

Recommendations for Future Research

Future research aiming to better understand the impact of CPS involvement on school outcomes should address these limitations. Researchers should aim to assess school outcomes through the use of multiple informants. Teachers, school administrators, or caregivers can provide additional information on academic functioning of CPS involved youth to inform interdisciplinary assessment and treatment. Researchers should aim to utilize standardized clinical interviews, measures, assessments, and formal academic records throughout research. Increased access to interstate records could provide further clarity on the extent of a youth's CPS involvement.

Researchers may increase specificity in results by restricting the number of raters and version of assessment. Should multiple raters be required for practical or research purposes, use of measures with greater interrater reliability may provide more robust results. For example, the Behavior Assessment System for Children, 3rd Edition (BASC3) has demonstrated excellent interrater reliability and internal validity (Eklund et al., 2022; Reynolds et al., 2015). The BASC3 measures similar constructs to the NV-CANS and is widely used across clinical settings. The use of measures such as the BASC3 with increased psychometric properties will aid in increasing the specificity of identifying levels of functioning across CPS involved youth.

Future studies may benefit from increased participants to allow for increased specificity in evaluating the effects of demographics on school outcomes. Additionally, through increased sample sizes, researchers may increase specificity in results by restricting placement at time of assessment. The present study utilized assessments completed regardless of placement at time of assessment to allow for increased generalizability. Although this provides a more representative understanding of all CPS involved youth, some of the specificity may be lost due to lack of specificity in possible analyses.

APPENDIX: NV-CANS MODULE 5: SCHOOL

[5] SCHOOL MODULE

This module is to be completed when the Life Functioning Domain, School item is rated '1', '2' or '3'.

Question to Consider for this Module: How well is the child/youth functioning at school? What are his/her strengths and areas of need? **Please rate the highest level from the past 30 days.**

EDUCATIONAL ATTRIBUTES

For the **Educational Attributes** use the following categories and action levels:

0	No current need; no need for action or intervention.
1	History or suspicion of problems; requires monitoring, watchful waiting, or preventive activities.
2	Problem is interfering with functioning; requires action or intervention to ensure that the need is addressed.
3	Problems are dangerous or disabling; requires immediate and/or intensive action.

SCH1. CLASSROOM BEHAVIOR
This item rates the behavior of the child/youth in classroom settings.

Questions to Consider
- How is the child/youth behaving in school?
- Have they had any detentions or suspensions?
- Have they needed to go to an alternative placement?

Ratings and Descriptions

0	No evidence of behavior problems at school in the classroom. Child/Y=youth is behaving in an appropriate manner.
1	Child/youth has some behavioral problems in the classroom that may be related to relationships with teachers and/or peers. This problems do not interfere with the child/youth's academic performance.
2	Child/youth has behavioral problems in the classroom. They are disruptive. Behavior has caused some reduction in academic performance.
3	Child/youth has severe behavior problems in the classroom resulting in severe and frequent classroom disruptions. Current behaviors may result in out of school and/or alternative placement.

SCH2. NONCLASSROOM BEHAVIOR
This item rates the behavior of the child/youth in school settings but not in the classroom (e.g. hallways, outside school building, on the bus).

Questions to Consider
- How is the child/youth behaving in school?
- Have they had any detentions or suspensions?
- Have they needed to go to an alternative placement?

Ratings and Descriptions

0	No evidence of behavior problems at school in areas outside of the classroom. Child/youth is behaving in an appropriate manner.
1	Child/youth has some behavioral problems at school outside of the classroom. This problems do not interfere with academic performance or standing.
2	Child/youth has behavioral problems at school but outside the classroom. They are is disruptive. Behavior problems interfere with academic performance or standing.
3	Child/youth has severe behavior problems resulting in severe and frequent problems at school but outside of the classroom. Current behaviors may result in out of school and/or alternative placement.

SCH3. ACADEMIC ACHIEVEMENT

This item rates the child/youth's grades or level of academic achievement.

Questions to Consider

- How are the child/youth's grades?
- Are they having difficulty with any subjects?
- Are they at risk for failing any classes or repeating a grade?

Ratings and Descriptions

0 Child/youth performs at or above grade level, passes all classes and is on track to meet their educational goals.

1 Child/youth performs at or slightly below grade level, does well in school and has some identified learning issues.

2 Child/youth performs below grade level and may be failing some subjects. Child/youth is at risk for failing current grade.

3 Child/youth performs more than one year behind same-age peers academically. Child/youth has severe school achievement problems and may fail most subjects. Child/youth is not expected to pass current grade.

SCH4. SCHOOL ATTENDANCE

This item rates the behavior of the child/youth in school or school-like settings. If school, day care or other educational setting is not in session, rate the last 30 days it was in session.

Questions to Consider

- Does the child/youth have any difficulty attending school?
- How many times a week is the child/youth absent?
- Once the child/youth arrives at school, do they stay for the rest of the day?

Ratings and Descriptions

0 No evidence of attendance problems. Child/youth attends school, day care, or other educational setting regularly.

1 Child/youth has some problems consistently attending school, day care or other educational setting. The child/youth may generally attend school, they may occasionally have absences and/or multiple tardy infractions. Additionally, the child/youth may have a history of moderate to severe attendance problems in past six months, but attends regularly and arrives to school timely (measured within the last 30 days).

2 Child/youth has moderate problems with school attendance. They may have multiple absences or tardy infractions per week resulting in referrals and/or school detention.

3 Child/youth has truancy issues and/or refuses to attend school. Parents may not be aware of these issues. A school-aged child/youth that is NOT enrolled in school may be rated here.

SCH5. TARDINESS

This item rates the frequency with which the child or youth is late to school or late in transitions among classes or classrooms..

Questions to Consider

- Does the youth have any difficulty arrive to school on time?
- How many times a week is the youth late for school or class?

Ratings and Descriptions

0 No evidence of problems with tardiness. Child/youth is almost always on time.

1 Child/youth has some problems consistently arriving at school on time or transitioning among classrooms in a timely fashion.

2 Child/youth is having problems with tardiness. They may be late to school weekly or late to a class on a regular basis.

3 Child/youth has tardy for school or classes on a regular basis.

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Zorc, C. S., O'Reilly, A. L. R., Matone, M., Long, J., Watts, C. L., & Rubin, D. (2013). The relationship of placement experience to school absenteeism and changing schools in young, school-aged children in foster care. *Children and Youth Services Review*, *35*(5), 826–833. https://doi.org/10.1016/j.childyouth.2013.02.006

CURRICULUM VITAE

Mallory Constantine

Constantine.Mallory@gmail.com

EDUCATION

Doctor of Philosophy in Clinical Psychology August 2024
University of Nevada, Las Vegas
Dissertation: *Impact of Placement Disruption on School Outcomes in Maltreated Youth*
Advisor: Dr. Christopher Kearney, PhD

Master of Arts in Clinical Psychology December 2021
University of Nevada, Las Vegas
Thesis: *Identifying Risk Factors for PTSD Symptom Clusters in Maltreated, Multiracial Youth Using Nonparametric Modeling*
Advisor: Dr. Christopher Kearney, PhD

Bachelor of Arts in Psychology May 2018
University of Nevada, Las Vegas
Magna Cum Laude
Minor: Anthropology

CLINICAL INTERNSHIP

UNLV Counseling and Psychological Services August 2023- July 2024
University Counseling Center
Primary Supervisors: Dr. Michael Browning, PsyD & Dr. Alyssa Newman, PsyD
Trauma Rotation Supervisor: Cesar Porcayo Morales, LCSW
Group Therapy Supervisor: Dr. Erin Williams, PhD
Position: Doctoral Intern

- The university counseling center at UNLV provides mental health services to its undergraduate and graduate students through a step-care model. Self-help resources, workshops, outreach, individual therapy and group psychotherapy.
- Implemented evidence-based intervention on a short-term model providing a maximum of twelve sessions per student.
- Provided individual interventions for racial, ethnic and gender diverse clients through tele-therapy and in-person formats with direct services hours averaging 20 hours per week, including 3 initial intake assessment per week.
- Presenting concerns included mood disorders, anxiety disorders, trauma and stressor disorders, disordered eating, grief and loss, relationship issues, identity and family concerns, and academic related difficulties. Primary theoretical approaches utilized included ACT & DBT.
- Co-facilitated group psychotherapy utilizing DBT manualized treatment. Received weekly group supervision from a licensed staff psychologist.

- Co-facilitated a weekly drop-in workshop teaching psychoeducation on trauma and DBT distress tolerance skills for campus community following a campus shooting.
- Designed, assembled, and disseminated grounding kits through tabling events for ing kits & tabling events for campus community following a campus tragedy.
- Created and disseminated four Intstagram reels for campus community providing psychoeducation on the impact of traumatic events following a campus tragedy.
- Created and presented outreach presentations on relevant topics for various campus departments. Notable outreach presentations are listed below.
- Supervised graduate level mental health trainees across disciplines on clinical work utilizing a trauma-informed developmental supervisory lens.
- Trauma rotation activities included maintaining at least 3 clients whose primary presenting concern was related to trauma, weekly readings, additional outreaches relating to trauma following a campus tragedy, and weekly supervision with a licensed provider.
- Other activities included weekly didactic seminars on multicultural competency, case conceptualization, professional development, and outreach. Engaged in case rounds to consult about student disposition, conceptualization and treatment planning; supervision with a licensed staff psychologist; consultation with mental health providers from various disciplines, and consultation with student family members.

CLINICAL PRACTICUM EXPERIENCE

Southern Nevada Adult Mental Health Services August 2022- July 2023

Civil & Forensic Inpatient Hospital
Supervisor: Dr. Shera Bradley, PhD
Position: Doctoral Practicum Trainee

- State adult inpatient hospital for both civil and forensic patients. Civil patients are generally admitted under involuntary holds. Forensic patients have been found incompetent to proceed with legal cases, been found permanently incompetent and are committed to the hospital for 10 years or more.
- Clients present with a range of behavioral, emotional, and developmental presenting concerns including neurodevelopmental disorders, depressive disorders, anxiety disorders, trauma and stressor disorders, disruptive, impulse-control, self-harm and psychotic disorders. Primary theoretical approaches utilized included DBT and CBT for Psychosis.
- Provided individual therapy and group services for long-term legal commitment for forensic patients, specifically DBT and CBT for Psychosis. Received weekly supervision from multiple licensed psychologists in both live and traditional formats.
- Provided CBT for Psychosis group therapy services for civil in-patient clients. Received weekly supervision from multiple licensed psychologists in both live and traditional formats.

- Other activities included weekly 2-hour didactic seminars focused on mental health treatment and the legal system, engaged in interdisciplinary treatment within an in-patient setting.

UNLV Academic Success Center May 2022 – May 2023
University Academic Success Center & Disability Resource Center
Supervisor: Dr. Michelle Paul, PhD
Position: Learning Specialist

- The Academic Success Center (ASC) Learning Specialist position partners with the Disability Resource Center to provide comprehensive psychodiagnostic evaluations at an interdisciplinary department clinic for students in need of academic accommodations.
- Conducts psychodiagnostic evaluations using a flexible battery of psychometrically validated tests and measures.
- Clients include young adult college students and student athletes with Intellectual Disability, ADHD, learning disorders, and mood disorders from various cultural backgrounds.
- Consults with multiple departments on UNLV's campus to assist clients in navigating a collegiate system while requesting accommodations.
- Scored and interpreted assessment results to differentially diagnose and write an integrative report utilized in providing feedback to clients.
- Engaged in clinical interviewing and feedback sessions for all assessment clients.
- Received weekly individual supervision with digital video review, review of conceptualization of clients, determination of evidence-based assessment battery and interpretation of results, integrative report writing, and providing feedback to clients.
- Assessments Administered: ASEBA, ABAS-3, D-KEFS, WJ-ACH, WJ- COG, WJ-ORAL.

UNLV PRACTICE: A Community Mental Health Clinic May 2022 – August 2022
Department Mental Health Training Clinic
Supervision Supervisor: Dr. Michelle Paul, Ph.D.
Position: Supervisor in Training

- Concurrent with coursework in supervision, provided weekly individual supervision from an integrative, developmental and interpersonal process recall framework to a first-year practicum student with a caseload of ranging from 7-4 clients and intake appointments. Utilized video-review as a supervisory practice.
- Supervised student in providing evidence-based practices for diverse clientele and presenting concerns including mood disorders, anxiety disorders, and suicidality.
- Attended weekly individual supervision of supervision which included video review.
- Participated in biweekly interdisciplinary case rounds to discuss case conceptualization and review evidence-based practices.

Group Therapy Supervisor: Dr. Amy Black, Ph.D.
Position: Doctoral Practicum Trainee

- Acted as process observer and co-facilitated weekly Interpersonal Processing psychotherapy group in-person for adults with approximately 8 clients.
- Received weekly group supervision and participated in weekly case rounds to discuss treatment recommendations for new group clients. Additionally, discussed processes occurring within the group and effective interventions to use to assist clients in meeting treatment goals.
- Monitor group client outcomes through routine outcome monitoring.

UNLV Counseling and Psychological Services August 2021- May 2022
University Counseling Center
Supervisors: Dr. Luke Allen, PhD & Dr. Luke Jensen, PsyD
Position: Doctoral Practicum Trainee

- The university counseling center at UNLV provides mental health services to its undergraduate and graduate students through a step-care model. Self-help resources, workshops, outreach, individual therapy and group psychotherapy.
- Implemented evidence-based intervention on a short-term model providing a maximum of twelve sessions per student.
- Provided individual interventions for racial, ethnic and gender diverse clients through tele-therapy and in-person formats with a caseload of 12 clients per week, with an additional initial intake assessment of 2 students per week.
- Presenting concerns included mood disorders, anxiety disorders, trauma and stressor disorders, disordered eating, grief and loss, relationship issues, identity and family concerns, and academic related difficulties. Primary theoretical approaches utilized included ACT, DBT, MI, IPT, and EFT.
- Participated as an observer for meditation & mindfulness group through tele-therapy. Received weekly group supervision from a LCSW.
- Co-facilitated group psychotherapy for self-compassion group utilizing integrative evidence-based practices. Received weekly group supervision from a licensed staff psychologist.
- Other activities included weekly 1-hour didactic seminars focused on mental health treatment; case rounds to consult about student disposition, conceptualization and treatment planning; supervision with a licensed staff psychologist; campus outreach; and supervision with a psychology doctoral intern.

Department of Child and Family Services – Child Haven Campus May 2021- May 2022
Emergency Shelter Group Home
Supervisors: Dr. Lisa Linning, PhD
Position: Doctoral Practicum Trainee

- Department of Child and Family Services – Child Haven Campus provides emergency shelter for children and adolescents who are removed from their home due to maltreatment.
- Developed and facilitated a group on emotional intelligence, empathy and prosocial behaviors based in DBT skills for diverse maltreated children aged 2-7yo.
- Worked in an interdisciplinary team to provide comprehensive care for youth living at Child Haven.
- Received weekly supervision from a licensed clinical psychologist focusing on program development and evidence-based practices.

UNLV PRACTICE: A Community Mental Health Clinic May 2022 – August 2022
Department Mental Health Training Clinic
Individual Therapy Supervisors: Dr. Tara Raines, Ph.D. & Dr. Michelle Paul, Ph.D.
Group Therapy Supervisors: Dr. Stacy Graves, Ph.D., Dr. Noelle Lefforge, Ph.D. & Dr. Amy Black, Ph.D.
Assessment Supervisor: Dr. Tara Raines, Ph.D.
Position: Doctoral Practicum Trainee

Individual Therapy

- Provided evidence-based therapeutic services to racial, ethnic, and gender diverse children and adolescents in individual and family formats through tele-therapy with a caseload of approximately 3 clients per week.
- Youth were aged 10-13 with a range of behavioral, emotional, and developmental presenting concerns including neurodevelopmental disorders, depressive disorders, anxiety disorders, trauma and stressor disorders, disruptive, impulse-control, and self-harm. Primary theoretical approaches utilized included PCIT, PMT, CBT, DBT, Collaborative Assessment and Management of Suicidality (CAMS), and EFT.
- Consulted with school and medical professionals to increase continuity of care for adolescent clients.
- Bi-weekly intake appointments for children, adolescents and adults with a wide range of presenting concerns.
- Received weekly individual supervision with video review. Attended weekly practicum seminars, case conferences and interdisciplinary clinic team meetings (clinical and school psychology and mental health counseling). Attended monthly interdisciplinary case conferences with child psychiatry.

Group Psychotherapy

- Co-facilitated weekly DBT skills group through tele-therapy for adults with approximately 10 clients.
- Received weekly group supervision and participated in weekly case rounds to discuss treatment recommendations for new group clients.
- Provided case management as adjunct to group psychotherapy to identify and manage client treatment goals, prevent client attrition, increase client engagement, and manage acute symptoms that may necessitate management in addition to group psychotherapy (e.g., suicidality, substance use)
- Provide pre-treatment preparation to incoming group members to increase effectiveness, improve client outcomes and reduce client attrition.
- Monitor group client outcomes through routine outcome monitoring.

Assessment

- Conducted psychodiagnostic and neuropsychological assessments using a flexible battery of psychometrically validated tests and measures with children and adolescents with a range of referral questions.
- Scored and interpreted assessment results to differentially diagnose and write an integrative report utilized in providing feedback to clients.
- Engaged in clinical interviewing and feedback sessions for all assessment clients and their parents.
- Received weekly individual and group supervision with digital video review, review of conceptualization of clients, joint determination of evidence-based assessment battery and interpretation of results, integrative report writing, and providing feedback to clients.
- Assessments Administered: BASC-3 (Parent & Self-Report), BAI, BREIF (Parent and Self Report), CTOPP-2, CPT-3, D-KEFS, KABC-II, KTEA-2, KSADS, WAIS-4, WIAT, WISC-V, WRAML, WJ-ACH, WJ- COG, WJ-ORAL.

OTHER CLINICAL EXPERIENCE

Adolescent and Child Trauma (ACT) Lab August 2018 – July 2024
University of Nevada, Las Vegas
Supervisor: Dr. Christopher Kearney
Position: Graduate Student Researcher

- The ACT Lab is an applied clinical research lab seeking to advance psychological knowledge and provide high quality mental health care assessments to maltreated children and adolescents.
- Administered psychodiagnostic assessments to diverse population of maltreated youth who were emergently removed from their home and placed in group housing.

- Scored and wrote comprehensive psychodiagnostic evaluations used in the determination of therapeutic services provided to children and adolescents under the care of child welfare.
- Supervised and trained students in the administration of psychodiagnostic assessments, suicide & homicide risk assessments.
- Assessments Administered: A-DES, CPTSD-RI, CUMHA, ERQ, NV-CANS, RCADS, RSCA, PTCI

The UNLV Child School Refusal and Anxiety Disorders Clinic February 2018 – May 2019
University of Nevada, Las Vegas
Supervisor: Dr. Christopher Kearney
Position: Graduate Student

- The UNLV Child School Refusal and Anxiety Disorders Clinic provides evidence-based mental health services to youth and adolescents with a range of behavioral and emotional concerns related to school attendance problems.
- Co-facilitated group therapy for children ages 5-8yo diagnosed with Selective Mutism and their parents for an outcome study.
- Utilized an exposure-based cognitive-behavioral framework with separate group sessions for children and parents.

NOTABLE OUTREACH EXPERIENCES

TikTok Mental Health Myths for Upward Bound Students July 2024
University of Nevada, Las Vegas

- Developed and provided a workshop for Upward Bound High School students providing psychoeducation on effective use social media and common misinformation about mental health concerns.

Coping Corner January – May 2024
University of Nevada, Las Vegas

- Developed curriculum for drop-in workshop for 16 weeks. Workshop included psychoeducation on traumatic reactions and DBT distress tolerance skills for campus community following a campus tragedy.

Coping Kits January 2024
University of Nevada, Las Vegas

- Designed, assembled, and disseminated grounding kits based in mindfulness techniques for campus community following a campus tragedy.

Instagram Reel Posts January 2024
University of Nevada, Las Vegas

- Created psychoeducational reels on traumatic reactions for UNLV CAPS Instagram Page following a campus tragedy.

Grief and Loss Through the Holidays Workshop December 2023
Virtual space in partnership with the Intersection, University of Nevada, Las Vegas

- Developed and provided psychoeducational workshop to students about the impact of grief and loss, reminders of grief and loss, and coping skills specific to holidays and important grief dates.

Impact of Intergenerational Trauma Workshop November 2023
Student Wellness Center, University of Nevada, Las Vegas

- Developed and provided psychoeducational workshop to students about the impact of intergenerational trauma, family cycles, and cycle breaking and healing.

Healthy Relationships After Trauma Workshop October 2023
Student Wellness Center, University of Nevada, Las Vegas

- Developed and provided psychoeducational workshop to students about the impact of trauma on relationships, healthy communication, consent, boundaries, healthy conflict, communication skills, and safety planning.

Spotting Signs of Mental Illness Presentation
Writing Center Staff, University of Nevada, Las Vegas September 2023

- Created and provided training for writing center staff members in identifying and approaching students with mental health concerns. Training also included how to engage students of concern in conversations about seeking mental health referrals.

First Year Experience Roundtable September 2023
University of Nevada, Las Vegas

- Provided information about campus mental health resources to first year students and answered questions relating to mental health.

Rebel Ready Week
University of Nevada, Las Vegas August 2023

- Created presentation and provided psychoeducational presentations to incoming undergraduate students about use of mindfulness skills and campus mental health resources.

Behind Closed Doors August 2023
University of Nevada, Las Vegas

- Assisted residential assistances in training to identify mental health concerns including suicidality and engage in conversations referring students of concern to mental health resources.

PSY CHI "Applying to Graduate School Panel" March 2021
University of Nevada, Las Vegas
Position: Doctoral Student Panelist

- Answered questions to undergraduate students regarding preparing, selecting, applying and completing graduate school in the field of psychology.

LEADERSHIP & PROFESSIONAL SERVICE

Nevada Psychological Association (NPA) 2021 - 2023
Positions: State Advocacy Coordinator & UNLV Student Campus Representative

- NPA is Nevada's state psychological association which aims to represent licensed psychologists and others affiliated with the delivery of psychological services within the Nevada.
- Duties included acting as student liaison within the state executive board and southern regional boards, attending executive board meetings, advocate for psychology student needs, provide educational resources to graduate and undergraduate students, and serve as student moderator for continuing education courses.
- Notable projects include initiating a student mentoring program for both undergraduate and graduate students, creating and disseminating list of low/no-cost mental health providers for psychology graduate students, increase student involvement in NPA through partnership with college organizations across Nevada.

Interprofessional Education and Practice Club (IPEP) 2021 - 2023
Positions: Secretary-Treasurer

- IPEP is a student-led organization encouraging the collaboration and dissemination of education, research, and training to a wide range of allied health care professions at UNLV.
- Duties included recruiting undergraduate and graduate students, scheduling meetings, and organizing case vignette and discussion topics.

UNLV Psychology Clinical Student Committee (CSC) 2019 - 2023
Positions: Co-Chair, Committee Chair Elect

- CSC acts as an intermediary liaison between Clinical Psychology Ph.D. students to department faculty, university organizations, and other relevant committees.
- Duties included advocating for student needs, increasing student engagement, increasing student and faculty recognition, planning social events, improving department cohesion, establishing alumni connections, and addressing the diversity needs of students.

UNLV Outreach Undergraduate Mentoring Program 2018-2023
Position: Graduate Mentor

- Provided mentorship to undergraduate psychology students from under-represented backgrounds to increase student retention and graduate school applications.
- Duties included one-on-one mentoring, linking students to resources (e.g., faculty, contacts, research experience, job opportunities etc.), providing CV development, editing application materials, guiding career planning, interview preparation and attending mentoring training.

CAMPUS AND DEPARTMENTAL TALKS

Constantine, M. *How and Why Foster Care Impacts Maltreated Youths' School Performance.* (2024, April). Robert E. Lang Memorial Fellowship Lecture presented by The Lincy Institute and Brookings Mountain West at University of Nevada, Las Vegas. Las Vegas, NV.

Constantine, M. *Identifying Risk Factors for PTSD Symptom Clusters in Maltreated, Multiracial Youth Using Nonparametric Modeling.* (2022, April). UNLV Psychology Department Research Fair at University of Nevada, Las Vegas. Las Vegas, NV.

Constantine, M. *Identifying Risk Factors for PTSD Symptom Clusters in Maltreated, Multiracial Youth Using Nonparametric Modeling.* (2021, October). The Rebel Grad Slam presented at University of Nevada, Las Vegas. Las Vegas, NV.

PEER-REVIEWED PUBLICATIONS

Constantine, M., & Kearney, C.A. (2022) Classification and regression tree analysis to examine risk of posttraumatic symptoms among maltreated, multiracial adolescents. *Child and Youth Services Review.*

BOOK CHAPTERS

Kearney, C. A., Burke, S., **Constantine, M**., & Rede, M. (2019). Trouble de stress post-traumatique chez l'enfant et harcèlement. In L. Mathis (Ed.), *Harcèlement scolaire: de la destruction à la reconstruction* (pp. 91-94). Paris: Editions Josette Lyons.

Strong, M.N., **Constantine, M.**, Chang, R., Cheung, D., & Wong-Padoongpatt G. (Accepted). Trauma Related to Racial Discrimination During COVID-19: Lessons Learned. In Rezai et al., (Eds.), Coronavirus disease 2019 (COVID-19): Lessons Learned. Springer Nature.

PRESENTATIONS

Constantine, M., Rede, M., Castillo, J., Kearney, C.A. (2023, April). Identifying Risk and Protective Factors of Increased Arousal Symptoms for Multiracial, Maltreated Youth. Poster to be presented at the Society for Research in Child Development (SRCD) Biennial Meeting Conference, Salt Lake City, UT.

Constantine, M., Rede, M., Castillo, J., Kearney, C.A. (2023, March). Identifying Risk and Protective Factors of Re-Experiencing Symptoms for Multiracial, Maltreated Youth. Poster to be presented at the Society for Research on Adolescence (SRA) National Conference, San Diego, CA.

Burke, S., **Constantine, M.,** Mraz, A., Ellis, K., Howard, A., Kearney, C.A. (2021). *Do trauma-related cognitions predict indirect self-injurious behaviors in maltreated youth?* Poster accepted at the American Psychological Association (APA) Virtual Conference.

Mraz, A., Burke, S., **Constantine, M.,** Ellis, K., Howard, A., Kearney, C.A. (2021). *Diminished emotional and social resilience predicts dissociation in maltreated youth.* Poster accepted at the Association for Behavioral and Cognitive Therapy (APA) 55th Annual Convention, New Orleans, LA, United States.

Mraz, A., **Constantine, M.,** Burke, S., Ellis, K., Howard, A., Kearney, C.A. (2021, May). *Obsessive-compulsive disorder predicts traumatic dissociation in maltreated youth.* Poster presented at the Association for Psychological Science (APS) Virtual Conference.

Burke, S., **Constantine, M**., Rede, M., Howard, A., Mraz, A., Kearney, C.A. (2020). *Suicidal ideation, suicide attempts, and non-suicidal self-injury associated with lower rates of resilience in maltreated youth.* Poster accepted at the Association for Psychological Science (APS), Chicago, IL, United States. (Conference canceled)

Bacon, V. R, Fornander, M. J., Rede, M., **Constantine, M.**, Burke, S., Howard, A., Gerthoffer, A., Kearney, C. A. (2019, May). *Bullying as a risk factor for school absenteeism*. Poster presented at the Association for Psychological Science (APS), Washington, D.C.

Fornander, M.J., Bacon, V., Reede, M., **Constantine, M.,** Burke, S., Howard, A., Gerthoffer, A., Diliberto, R., Kearney, C.A. (2019, October). Selective Mutism Presentation in US versus Non-US Children. Poster to be presented at the Selective Mutism Association (SMA) National Conference, Las Vegas, NV.

Howard, A.N., Fornander, M.J., Bacon, V., Rede, M., Burke, S., **Constantine, M**., Gerthoffer, A., Diliberto, R., Kearney, C.A. (2019, October). Somatic symptoms and internalizing problems as moderators of selective mutism severity. Poster to be presented at the Selective Mutism Association (SMA) National Conference, Las Vegas, NV.

RESEARCH EXPERIENCE

Child & Adolescent Research in Selective Mutism, Anxiety & Absenteeism Lab (CHARISMA) August 2018 - Present

Supervisor: Dr. Christopher Kearney, PhD
Position: Graduate Researcher

- The CHARISMA Lab is an applied clinical research lab seeking to advance psychological knowledge, provide high quality mental health care services to children and adolescents with anxiety and related disorders.
- Train, supervise and mentor undergraduate research assistants in lab tasks and development as researchers.
- Analyze data to prepare for publications and posters utilizing SPSS.
- Manage lab tasks, undergraduate research assistants, data collection, input and analysis.
- Graduate clinician for both psychological assessment and group intervention as primary means of data collection.
- Thesis: *Identifying Risk Factors for PTSD Symptom Clusters in Maltreated, Multiracial Youth Using Nonparametric Modeling* utilized classification and regression trees to identify both risk and protective factors in the development of re-experiencing, avoidance, and hyperarousal symptoms in maltreated, multiracial youth.
- Dissertation: *Impact of Placement Disruption on School Outcomes in Maltreated Youth* will examine the relationship between the number of transfers in housing and the impact on school outcome variables relating to School Attendance/Problems specifically, classroom behavior, academic achievement and school attendance.

Baby & Child Rebel Laboratory 2017 - 2018

Supervisor: Dr. Jennifer Rennels, PhD
Position: Undergraduate Research Assistant

- The Baby & Child Rebel Laboratory is an experimental psychology research lab seeking to advance knowledge in how individuals attend to social cues, social decision making, face perception and processing.
- Contacted, recruited, and scheduled participants for multiple studies.

- Coded infant looking times and other data using multiple coding software platforms.
- Managed organizational lab tasks and assigned lab tasks.

Family Research & Services (FRS) and 2017 - 2018
The Optimum Performance Program in Sports (TOPPS) Laboratories
Supervisor: Dr. Bradley Donohue, PhD
Position: Undergraduate Research Assistant

- The FRS & TOPPS Laboratories is an applied clinical psychology research lab seeking to advance knowledge in optimization programs for mental health with student athletes and the use of Family Behavior Therapy to increase mental health outcomes.
- Contacted, recruited, and scheduled participants for multiple studies.

HONORS AND AWARDS

2023	**Inaugural Robert E. Lang Memorial Research Fellowship** *Fellowship awarded by The Lincy Institute & Brookings Mountain West awarded to an outstanding Ph.D. student completing dissertations in urban public policy.*
2022	**Summer Doctoral Research Fellowship** *UNLV Graduate College fellowship awarded to provide summer research support to approved research proposals*
2020	**College of Liberal Arts Summer Stipend Award** *UNLV Psychology Department Scholarship awarded to (5) Clinical PhD students annually to support research endeavors.*
2019	**OUMP Outstanding Mentor Award** *UNLV OUMP scholarship awarded to a mentor who nominated by mentees for excellent mentorship*

CERTIFICATIONS

Trauma Focused Cognitive Behavioral Therapy (Online portion of certification process)
Nevada Child and Adolescent Needs and Strengths 2.0 (NV-CANS)
UCLA Child/Adolescent PTSD Reaction Index for DSM-5 (PTSDRI)
Children's Uniform Mental Health Assessment (CUMHA)
CITI Program Human Research, Social/Behavioral IRB, Basic Course
Crisis Prevention Institute Training

AFFILIATIONS

American Psychological Association (APA)	2018 - Present
APA Division 53: Society of Child & Adolescent Psychology (SCCAP)	2018 - Present

Nevada Psychological Association (NPA) 2019 - Present

SELECTED PROFESSIONAL TRAININGS

Trauma Focused Acceptance and Commitment Therapy 2024
Online Training
Russ Harris

Acceptance and Commitment Therapy: Theoretical Immersion and Skill Building Intensive 2021
Online Training
Christopher Ferrand, Psy.D.
16 hours

Tackling Eating Disorders: Risks, Prevention, Early Detection, & Evidence Based Interventions 2021
Online Training
Lindsey Ricciardi, Psy.D. *6 hours*

Dialectical Behavior Therapy (DBT): Part I 2019
Alan Fruzzetti, Ph.D.
8 hours

Interprofessional Practice and Education 2020 & 2021
University of Nevada, Las Vegas *8 hours/year*

TEACHING EXPERIENCE

Graduate Student Instructor Fall 2020 – Spring 2022
University of Nevada, Las Vegas
Courses taught: Psychological Research Methods; Introduction to Psychology

- Instructor for multiple sections of 35 undergraduate Psychological Research Methods and Introduction to Psychology each semester via synchronous and asynchronous online formats.
- Selected textbook and learning materials to base each course and developed corresponding curriculum.
- Developed syllabus, class activities, writing projects, quizzes and exams for each course.
- Incorporated topics pertaining to personal growth, diversity, scientific mindedness and ethical decision making within psychology into course material.
- Student evaluations reflected positive experiences in instructor motivating students, class organization and preparation, communication of content and feeling instructor has

genuine interest in student learning. Overall student evaluations were above department mean ranging from (4.29-4.82 out of 5).

- Topics taught include: critical examination of research methods in psychology, including experimental and quasi-experimental designs, correlational methods, clinical research techniques, natural observation, survey methods, phenomenological approach, introduction to psychology, including introductory treatment of sensation-perception-cognition, physiological psychology, learning, personality, development, social psychology, assessment, and history of psychology.

Graduate Teaching Assistant Fall 2018 – Spring 2019

University of Nevada, Las Vegas

Courses: UNLV Psychology Capstone Course

- Assisted undergraduate students in developing a well-formed research study.
- Assisted undergraduate students with course material and graded undergraduate assignments.